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ORIGINAL ARTICLES.

INJURIES OF THE MAIN BLOODVESSELS IN THE AXILLA CAUSED BY EFFORTS TO REDUCE DISLOCATIONS OF THE SHOULDER.[1]

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DISLOCATION of the shoulder, an injury, both relatively to the other dislocations and actually common, is, at least when recent, deemed one of minor gravity, the cure of which can be effected readily and without risk to the patient. But, from time to time, cases are reported in which the gravest consequences have followed reduction or the attempt to reduce, and such accidents have happened and continue to happen in the practice of even the most experienced surgeons, aided by anæsthetics and employing methods of manipulation rather than those of force. The importance of the general recognition of this possibility, the interest attaching to certain questions of diagnosis and treatment, and the discovery of certain errors current in the statistics of the subject, have led me to bring before you a question which, within the last few years, has been the theme of several writers, and with which all are reasonably familiar. Among these accidents, the most frequent and most important are those of injury to the main bloodvessels in the axilla.

Although the earliest recorded cases of this accident occurred at about the beginning of the eighteenth century, the subject did not receive the attention of systematic writers on surgery until after the publication, in 1827, of an article by Flaubert.[2] Malgaigne, in 1855, discussed the subject at length in his work on dislocations, mentioning sixteen cases of all kinds, certain and uncertain. Callender,[3] taking as a text his own fatal case, again collected and collated the known cases; and similar use was made of the material, and other cases added to the list by Le Fort,[4] Willard,[5] and Marchand.[6] In 1882 Körte[7] reported three personal cases, and wrote a very full and valuable paper on the subject containing forty-four supposed (actually thirty-eight; see note below) cases of dislocation of the shoulder, in which the vessels had been seriously injured during the act of dislocation or of reduction; and in 1884 Cras[1] reported a personal case of injury of the axillary artery, and added a few others to Körte's list. Strictly speaking, several of these cases should not be here considered, since in them the vessel was injured at the moment of dislocation and not during reduction, and in many others it remains uncertain whether the same objection might not be made to them. They are retained because they serve equally well with the others to further the study of most features of the subject.[2]

The trustworthy recorded cases of injury to the larger vessels of the axilla in dislocation or reduction of dislocation of the shoulder are forty-four in number. Of these, the axillary vein alone was ruptured in three (Froriep,[3] Price,[4] Hailey[5]), although I think the last one doubtful, and the artery and vein together in two (Platner,[6] Baum[7]). In most of the others the axilliary artery or one of its branches was injured, but in some the source of the hemorrhage remains uncertain. In thirty-two cases death or amputation of the arm furnished the opportunity to ex-

[1] Read before the New York Surgical Society, May 26, 1885.

[2] Mém. sur plusieurs cas de luxations dans lesquels les efforts pour la réduction ont été suivis d'accidents graves. Répertoire d'ant. et de phys., 1827.

[3] St. Bartholomew's Hosp. Reports, vol. ii. p. 96, 1866.

[4] Dic. encyclopédique des sci. méd. Article "Axillaires."

[5] Phila. Med. Times, 1873, vol. iii. p. 721.

[6] Des accidents qui peuvent compliquer la réduction des luxations traumatiques. Thèse de concours, Paris, 1875.

[7] Arch. für klinische Chirurgie, vol. xxvii. p. 631.

[1] Bull. de la société de chirurgie, p. 739, 1884.

[2] Reference to the original accounts, so far as I have been able to obtain them, shows several errors in the lists given by the above-mentioned writers. Sir Astley Cooper's case must be excluded because it is the same as Gibson's first case, having been simply quoted by Cooper without acknowledgment.

Blackman's case must be excluded because it proved to be not a dislocation, but a fracture of the humerus. As it has been widely quoted and is, indeed, given in detail as a dislocation by Dr. Hamilton (*Fract. and Disloc.*), an explanation of the manner in which the error arose may be of service. Blackman reported it as a dislocation in the *Western Lancet*, August, 1856, p. 469, and an abstract of this report was given in the *Am. Journal of the Med. Sciences*, 1856, vol. xxxii. p. 571, and is quoted by most writers. But on page 508 of the same (August) number of the *Western Lancet* is a note by Blackman, which apparently had been overlooked by the maker of the abstract, giving the results of the autopsy and showing the error in the diagnosis. The fracture was at the surgical neck, and the end of the shaft had been displaced upward and lay in contact with the coracoid process; the head was still in the glenoid cavity, and had partly united with the shaft about an inch below its upper end.

In Segond's case not only does the artery appear to have been wounded by a piece of the dish the patient was carrying, but it is doubtful even if the limb was dislocated.

In Delpech's case it is recorded only that at the moment of reduction the patient grew pale, became unconscious, and died immediately, and there is nothing to show the cause of death.

In Fano's the artery may have been simply compressed. O'Reilly's is the same as Adams's. The latter admitted the case into hospital, the former operated upon it.

A case which Callender quotes, a man treated by a "bone-setter," does not deserve to be grouped with those treated by professional surgeons, although the force employed—traction by twelve or eighteen assistants—was not much in excess of that recorded in some of the other cases, or of what I have myself seen employed. Not only the artery, but also the muscles were torn and the humerus was broken.

Green's case (*Lancet*, vol. viii. pp. 189 and 283, 1825,) is quoted as one of recovery after ligature of the subclavian, but the reports end on the eighteenth day with the ligature still in place, and after a free hemorrhage on the thirteenth day.

[3] Malgaigne, Luxations, p. 151.

[4] Callender, loc. cit., p. 107.

[5] British Medical Journal, ii. p. 634, 1863.

[6] Malgaigne, loc. cit., p. 151.

[7] Deutsche Klinik, p. 431, 1867.

amine the region and determine the character of the lesion; this, in some cases, was a complete or partial rupture of all the coats of the artery, or of the inner and middle coats alone, with subsequent formation of a circumscribed aneurism.[1] In other cases the vitality of the wall appears to have been diminished or destroyed by direct pressure, and this to have been followed, after the lapse of a few days, by rupture (Warren[2]), or, still later, by the formation of an aneurism. In Gibson's second case[3] an aneurism appears to have formed in consequence of the earlier attempts to reduce, and then itself to have been ruptured when Gibson effected reduction. Rupture appears always to have taken place quite high up, and usually at the point pressed upon by the head of the humerus. Callender found it necessary to divide the pectoralis minor to reach it. In the fatal cases of injury of the vein alone the vessel was torn completely, or almost completely, across. In Baum's case both artery and vein were partly torn by a broken piece of the new bony socket that had formed about the head of the humerus. The artery was tied above the origin of the long thoracic, and a second ligature was subsequently placed on it at the level of the lower border of the pectoralis major.

In five cases (Callender, Desprès,[4] and Körte's three) only a small (one-sixth of an inch) oval opening was found on the anterior wall of the artery, and was thought to have been produced by the tearing off of a branch, the subscapular or circumflex.

In Gärtner's[5] case the opening in the artery is described as funnel-shaped, but the tumor was small, formed slowly, and presented the common signs of aneurism, so that it seems probable that what he describes as the opening included also the neck of an aneurismal sac. In other cases the subscapular (Lefebvre[6]) or the circumflex artery (von Pitha[7]) was torn across at or near its origin. These last-named eight cases form a considerable portion of the whole number, and are of great importance because they explain the persistence of the radial pulse noted in several of the histories.

Of twenty-nine cases in which the age of the patients is given, in twenty they were more than forty years old. The youngest was twenty (Gärtner), the oldest eighty-six (Sands[8]). In very few of the cases is it noted that the arteries were atheromatous, although the advanced age of many of the patients makes it probable that the elasticity of the vessels was diminished.

In more than half the cases the dislocation was recent—less than three weeks. In not more than one-third of them is it reasonably certain that the lesion was caused during reduction; in three cases it was certainly caused by the dislocation; in the remainder the cause is obscure. To these latter belong those cases in which the reduction was promptly effected, and without the use of much force or of exaggerated positions of the arm.

In many of the others the attempt to make reduction was greatly prolonged or several times repeated, and the force used was very great or improperly applied. This last criticism is probably applicable to the earliest four cases (Verduc, Petit, Platner, Bell), about which nothing is known except that death was caused by hemorrhage. In one of them (Bell[1]) the use of the ambi is mentioned, and it is probable that it or the method of the door or ladder was employed in all.

In some the injury was evidently caused by excessive traction (Gibson, traction by five or six assistants in one case, by pulleys for nearly two hours in the other; Leudet, eight assistants); in others by faulty manœuvres, such as extreme abduction or elevation of the arm, rotation, and circumduction; in others again apparently by direct compression of the vessel against the underlying bone, as by the booted heel in the axilla (Warren, Rivington[2]), or possibly by the thumbs (Panas[3]).

Leaving aside the earlier cases in which faulty methods no longer in use were employed, and those old dislocations in which the relations and connections had been permanently changed by fibrous or bony tissue of new formation, it becomes evident that in dislocation of the shoulder the accident is most to be apprehended when the elbow is raised in abduction to the height of the shoulder, or is carried, as in Callender's case, across the chest and face in a wide movement of circumduction; and for this reason, that in these movements the dislocated head of the bone is turned downward into the axilla, and the vessels which lie upon its inner side are pressed down before it and forcibly put upon the stretch, while those branches which run almost directly outward, the subscapular and circumflex, and are fixed to the tissues amid which they branch, are directly and forcibly elongated. Even when the head of the humerus is in its socket the axillary vessels are put upon the stretch when the arm is widely abducted, as can be readily verified during an operation for the removal of the axillary glands, or, still more simply, by observing the arrest of the radial pulse when the arm is raised and carried backward; and there are several cases on record in which this movement alone has resulted in the formation of an axillary aneurism or in rupture of the axillary artery.[4] Although in dislocaton inward the limb is shortened by being abducted, yet the artery is not thereby relaxed, but, on the contrary, it is still further stretched around the head of the bone. Jössel,[5] in a recent case in which death was caused by associated injuries, found the "nerves of the brachial plexus, especially the circumflex nerve and the subscapular artery, greatly stretched by the head of the humerus," and according to Körte (loc. cit., p. 640), he found in another

[1] It is possible that this rupture may be followed by obliteration of the artery at the wounded part. Scarpa held this opinion (Hogson, Dis. of Arteries, p. 488).
[2] Med.-Chirurg. Trans., vol. xxix. p. 25.
[3] Surgery, vol. i. p. 334.
[4] Bull. de la soc. Chirurgie, p. 116, 1878.
[5] Schmidt's Jahrbüch., 1871, vol. cli. p. 304.
[6] Cras, loc. cit., p. 750.
[7] Körte, loc. cit., p. 649.
[8] Medical Record, p. 45, 1880.

[1] Callender, loc. cit., p. 101.
[2] British Medical Journal, 1872, i. p. 420.
[3] Marchand, loc. cit., p. 52.
[4] Cases of Pelletan and Paget, and specimen in museum of St. George's Hospital; Callender, loc. cit., pp. 103 and 107.
[5] Deutsche Zeitschrift, vol. xiii. p. 177, 1880.

case of recent dislocation the subscapular artery torn.

In his remarks on the case at the Sheffield Infirmary[1] in which the artery was torn across during an unsuccessful attempt to reduce a dislocation of six weeks' standing, and an incision was made through which each end of the torn artery was tied, Mr. Jackson says: "One thing was noticed on cutting into the axilla: the extreme tension caused by the pressure of the head of the humerus on the vessels and nerves when the arm was raised above the shoulder." This patient died two days after the operation.

In some of the cases in which it is certain or probable that the injury to the vessel was inflicted at the moment of dislocation, it is noted that the latter was produced while the arm was widely abducted—that is, under circumstances in which the head of the humerus would be driven downward and inward.

If the dislocation is an old one, and especially if there has been much inflammatory reaction and the vessels have become firmly adherent to the bone or embedded in unyielding cicatricial tissue, the liability to rupture is increased because the loss of elasticity occasioned by the latter condition, and because of the limitation of the strain to a shorter segment of the vessel in the former. If, in addition, the distensibility of the vessel has been further reduced by atheroma, the danger is still greater; and this last predisposing cause may properly be deemed sufficient to lead to the rupture even when the traction is slight and the manœuvres are confined within a narrow range.

In Anger's[2] case, fracture of the head (?) of the humerus coexisted; in Mash's[3] two pieces had been chipped off the head of the humerus, and were lying in the glenoid cavity. In several others fracture of the greater tuberosity of the humerus or of the rim of the glenoid cavity is noted; the former of these two complications is common in inward dislocation of the humerus, and could have had no direct influence in causing the injury of the vessels: the latter, also, was probably without influence, since the vessels are pushed away from the scapula, and the fragment remains attached to it.

The *symptoms* at the beginning present two widely different forms; in one, the less common, a tumor presenting many of the signs of an encysted aneurism appears in the axilla a few days or weeks after the reduction, and increases in size rather rapidly; if not successfully treated, it soon involves the skin and ruptures externally. In the other form, the more common, a diffused fluctuating swelling, without bruit or pulsation, appears immediately, or within a few hours, in the axilla, raising the pectoral and deltoid muscles, or is, perhaps, most prominent posteriorly, and in most cases promptly reaches a large size, even that of the adult head (Lister[4]); the radial pulse sometimes persists. The only exception to rapid growth among the recorded fatal cases is Körte's third case (loc. cit., p. 635), in which the extravasated blood disappeared slowly, leaving a firm, non-pulsating lump, as large as a walnut, in the course of the axillary artery, which a surgeon supposed to be a lymphatic gland, and undertook to extirpate nearly five months after the accident. It proved to be an aneurism containing much stratified clot; the axillary artery was tied above and below, and the patient died.

In several cases the patients died promptly after the accident, sometimes after profound syncope, sometimes (Gibson's first case[1]) after a short period of apparent well-being, with symptoms of shock or acute anæmia. In two, which finally ended in recovery (Sands, Agnew[2]), the patients were at first greatly prostrated, and death by syncope threatened. In another (Mash's) emphysema developed in the arm, and the patient died forty hours after the reduction. In this case the inner and middle coats of the artery were torn across "just beyond the point of origin of the dorsal scapular branch." The radial pulse was at first perceptible, but had ceased the next morning.

In most of the others the swelling increased, and, in a longer or shorter time, ruptured spontaneously, or was threatening to rupture when operative interference (puncture, incision, or ligature of the subclavian) was resorted to. The longest period was in Bellamy's[3] case, six months after reduction, and even in this case the first hemorrhage occurred five weeks after reduction.

In the cases that recovered without operation (Agnew, Sands, Malgaigne,[4] Desault,[5] Anger, Nélaton's second case[6]) the swelling subsided, and the ecchymosis was slowly absorbed. Agnew's patient was discharged in ten days, Anger's and Desault's in a fortnight, Malgaigne's was well on the twenty-second day, and Sands's, a woman eighty-six years old, made a slow recovery. In three of them (Nélaton's, Anger's, Sands's[7]) the diagnosis of rupture of the axillary artery was made. Desault's diagnosis was "emphysema of the cellular tissue;" he had reduced by violent and prolonged traction a dislocation of six weeks' standing in a man sixty years old. At the moment of reduction a tumor formed suddenly under the pectoral muscle, and soon filled the axilla; the patient fainted, and the pulse was barely perceptible on the affected side; the tumor was well defined, elastic, not fluctuating, the overlying skin was not at first discolored, and percussion gave a sort of sound (*espèce de bruit*). On these symptoms rupture of the artery was excluded, and the diagnosis of emphysema made. Malgaigne and Agnew made the diagnosis of rupture of the axillary vein.

I think there is reason to doubt the correctness of

[1] British Med. Journal, Feb. 3, 1883, p. 207.
[2] Bull. de la soc. Chirurgie, p. 122, 1878.
[3] British Medical Journal, i. p. 526, 1872. Reported by Carruthers, the house surgeon.
[4] Edinb. Med. Journ., p. 829, 1873.

[1] Surgery, vol. i. p. 325.
[2] Willard, in Phila. Med. Times, vol. iii. p. 721, 1873.
[3] Lancet, ii. p. 260, 1880.
[4] Loc. cit., p. 150.
[5] Œuvres chirurgicales, i. p. 380.
[6] Referred to by Anger and Le Fort, loc. cit.
[7] Dr. Sands's patient died in May, 1885. The injury proved to have been of the axillary artery, which was occluded at a point a quarter of an inch above the origin of the posterior circumflex. The specimen was presented at the meeting of the New York Surgical Society, at which this paper was read, and a description of it will be found in the report of the proceedings.

the diagnosis in the last three cases, certainly in Desault's and Malgaigne's, for it was avowedly based on the persistence of the radial pulse, and although it is not so stated in the report of Dr. Agnew's case, it seems fair to assume that the same persistence of the pulse which is noted in the report was also the basis of his diagnosis. As has been already mentioned, rupture of the subscapular or circumflex artery has several times presented similar symptoms, and, as in Mash's case just quoted, the radial pulse may even persist after rupture of the inner and middle coats of the axillary artery itself. Pelletan[1] had a case similar to Desault's, made the same diagnosis, and incised the tumor; the patient died of hemorrhage, and the artery was found to have been ruptured.

In the two cases in which rupture of the vein alone was demonstrated post-mortem (Froriep, Price), the patients died promptly, in an hour and a half and on the following day, respectively. In the third case, Hailey's, in which this lesion is said to have been proved by the autopsy, the account of the examination is very unsatisfactory, and leaves it, I think, quite uncertain what the actual injury was. The patient was a man fifty-nine years old; the dislocation was caused by a fall from a wagon and was very easily reduced. The symptoms were, first, pain in the wrist, then, after a few days, swelling of the shoulder and œdema of the arm; at the end of two mouths a tumor appeared between the acromion and coracoid (*sic*), and death by exhaustion a few days later. The tumor was blood-clot, more than two pounds being removed from the axilla.

In De Morgan's case[2] "it was impossible to detect the source of the hemorrhage" at the autopsy, and it was attributed to the rupture of many small veins. This explanation also, I think, may well be questioned, for in this case too the radial pulse persisted, and at that time no cases had yet been reported in which similar symptoms had been shown to be caused by rupture or avulsion of a branch of the main artery. If, as seems probable from the account and in view of the ignorance of this fact, the examination was mainly directed to the condition of the veins, it is not unlikely that rupture of an arterial branch may have been overlooked, especially since the symptoms were not unlike those of some of the other cases in which this rupture was demonstrated (Després, Körte's second case). The symptoms and course of this case were, in brief, as following:

The patient was a man fifty-four years old, the dislocation subcoracoid, the reduction immediate, under chloroform, with the heel in the axilla. During the first week "there was nothing to be noticed but the ordinary swelling attending such a dislocation. This swelling, instead of subsiding, increased, and this somewhat rapidly towards the end of the first week. There was also some purple discoloration about the inner and posterior parts of the shoulder. Still, there were no appearances which might not attend an ordinary bruise or laceration about the part. But, in the course of the following week, enormous swelling had come on, extending from the elbow up the arm and over the chest to the level of the outer third of the clavicle, and over the scapula." The swelling was soft and fluctuating; the skin in places dark purple and thin; the radial pulse was natural. Fever, with slight shivering and one distinct chill. "About the third or fourth week an incision was made in the arm and the hand passed up into the cavity, which contained an enormous amount of blood, chiefly coagulated, extending under the pectoral muscles, down the side of the chest, and behind over a great part of the scapula, and communicating with the shoulder-joint. The subclavian and axillary arteries could be felt." The man died with symptoms of septicæmia.

In Körte's second case (loc. cit., p. 635) the patient was fifty-two years old, the dislocation forward and inward. Several unsuccessful attempts to reduce were made during the sixth month, and the last was followed by the gradual appearance of a non-pulsating swelling under the pectoral muscle, œdema of the arm, and sharp neuralgic pain. Radial pulse. The patient became feverish, the tumor softer, the skin thin, and at the end of six weeks it ruptured spontaneously. The hemorrhage was arrested with a tampon, and the patient died shortly afterward. The autopsy showed a large cavity occupying all the space under the pectoralis major, and filled with large blood-clots. On the outer and front side of the artery, 4 centimetres below the clavicle, was a transverse oval opening measuring 0.4 by 0.3 centimetre (one-sixth by one-eighth inch), thought (loc. cit., p. 650) to have been produced by the tearing off of an arterial branch.

In Desprès's case there was the same swelling, slowly increasing and becoming fluctuating, œdema of the arm, and persistence of the radial pulse. In addition, a bruit was audible after the tenth day, and the swelling subsequently pulsated at times. An operation for ligature of the subclavian was done on the forty-fifth day, and was followed by arrest of the pulsation; but, after the patient died, on the fifty-fourth day, it was found that the ligature had been placed upon a nerve immediately overlying the artery. The common trunk of the circumflex arteries was found to have been torn off at its origin.

On the other hand, in Körte's first case, in which the lesion proved, post-mortem, to be a similar opening upon the side of the axillary artery, and of almost exactly the same size, pulsation in the brachial and radial arteries was barely perceptible two months after the accident, when the patient first came under observation with an enormous pulsating swelling of the shoulder, filling the axilla and extending up to the clavicle.

These histories show, and many of the others might be quoted in confirmation, that, although the diagnosis, so far as the general nature of the accident, rupture of a bloodvessel, is concerned, does not long remain obscure; the identity of the injured vessel cannot always be determined. If the tumor pulsates, the diagnosis of rupture of an artery may be made; and if, in addition, the radial pulse is present, it is extremely probable that the injured vessel is not the main artery, but that one of its branches, probably the subscapular or circumflex,

[1] Clinique chirurgicale, vol. ii. p. 95. Quoted by Malgaigne.
[2] British Med. Journal, i. p. 5, 1872.

has been ruptured or torn off at its origin. Beyond this it does not seem at present possible to go with much certainty, although the great preponderance of arterial lesions in the known cases—26 out of 28, or, adding Hailey's and De Morgan's, out of 30, or, again, adding Platner's and Braun's, in which both artery and vein were torn, out of 32—makes it highly probable in any given case that an artery, and not the axillary vein, has been torn.

Of the remaining 12 cases, 6 recovered without operation (Desault, Malgaigne, Nélaton's second case,[1] Anger, Agnew, Sands), and have been already discussed. Nélaton, Anger, and Sands made the diagnosis of rupture of an artery. In the other 6—Warren, O'Reilly,[2] Green, Volkmann,[3] Létièvant,[4] Cras—the subclavian was tied; in 5 of them with success; in 1, Green's, the result is not known.

In the last 6, and in 3 of the first 6, it seems reasonably certain that an artery was injured, for pulsation of the swelling is noted in every account that is given in detail, and such was the opinion of the surgeons who treated them. The record, then, may be made as follows: Of 44 cases, an artery (the axillary or a large branch) was ruptured in 35, the artery and vein in 2, the vein alone in 2, in 2 dissection failed to reveal the source of the hemorrhage; and in 3, in which the patients recovered without operation, the symptoms do not justify a positive diagnosis.

The *terminations* were as follows: 12 recoveries, 31 deaths, and in 1 (Green's) the result is unknown; 20 received no operative treatment; of these, 6 recovered and 14 died.[5] In 14 the subclavian was tied, with 5 recoveries, 8 deaths, and 1 unknown result. In 6 an incision was made in the axilla, and the artery tied above and below the point of rupture; all died. In 4 the limb was disarticulated; 1 recovery, 3 deaths. The treatment in the cases that recovered without operation was simply compression of the swelling and immobilization of the arm, with the application of ice in Malgaigne's, and compression of the subclavian artery in Agnew's.

In drawing inferences from these results, it must be borne in mind that in many of the cases in which operations were undertaken non-operative treatment had previously been employed, and had resulted in a condition that made an operation necessary. Thus, using only those cases in which the record is sufficiently detailed, of the 14 cases of ligature of the subclavian, in 7 the operation was done after the lapse of several weeks or even months, in 1 on the third day, in 1 on the tenth day, and in 5 the length of the interval is not known. Of the 4 disarticulations, in 1 the operation was of a late date, in 1 five days after the accident, and in 2 unknown. Of the 6 treated by incision and double ligature of the axillary artery, the operation was done promptly in 2, and after a long interval in 4. Consequently the results of non-operative treatment may be tabulated as follows: Of 32 patients, 6 recovered, 14 died, and 12 (with 10 deaths) subsequently underwent operation, either because death by hemorrhage threatened, or because of the existence of a growing aneurism.[1] A fair inference is that conservative treatment may properly be tried at first, but should not be prolonged if the symptoms do not promptly yield; and, secondly, that, in case of resort to operation, ligature of the subclavian artery or disarticulation at the shoulder is to be preferred to incision of the sac and double ligature of the artery.

Experience with arteries wounded under other conditions has shown that they will sometimes quite readily heal, or the opening made into them will close, under pressure accurately made at the point of injury, and it would therefore be proper to attempt to treat this injury by direct, limited pressure. Whether or not it would be possible to recognize the wounded point and make efficient pressure directly upon it cannot be said, since the attempt does not appear to have been made. In default of such limited pressure, general compression of the swelling in the axilla seems to be the only other resource short of operation. The common treatment of ruptured artery,—incision, and double ligature of the vessel,—was immediately resorted to in only two of these cases, Lister's, and the one at the Sheffield Infirmary.[2] Both were promptly fatal.

An important question arises from these facts in connection with the treatment of dislocation of the shoulder: How far does the possibility of the occurrence of this accident affect the choice of a method of reduction? and also concerning the propriety of attempting reduction in cases that are not recent.

In the reduction of recent dislocations, these accidents show that abduction of the arm especially should be avoided, as also circumduction, violent traction, and rough pressure in the axilla. Kocher's method by manipulation appears well adapted to avoid the danger. It is also to be remembered that the injury to the vessel may be caused by the dislocation itself, and its symptoms may be masked by the swelling commonly present during the first few days.

In old dislocations the probability of the occurrence of the accident is increased by the more forcible measures usually necessary to break up the adhesions that bind the bones in their new relations; and, while it may be proper in many cases to make the attempt to restore the limb to usefulness, this possibility creates another reason for abstention when the patient is old, the duration of the dislocation long, and the adhesions firm. Even a dislocated arm may be very useful, and the fatality of this accident, more than 70 per cent. of deaths, may well cause the surgeon to hesitate to incur the risk merely for the sake of ameliorating a condition which does not endanger life and is quite compatible with activity and usefulness.

[1] After rupture of the tumor without hemorrhage, and suppuration of the sac and shoulder-joint. See Körte, loc. cit., p. 655.

[2] Cyclopædia of Anat. and Phys., vol. iv., part 1, p. 616, art. "Shoulder joint."

[3] Körte, loc. cit., p. 656.

[4] Cras, loc. cit., p. 748.

[5] Possibly Körte's second case should be included among the recoveries.

[1] Körte's second case is an exception; an error in diagnosis led to an operation after the aneurism had apparently undergone spontaneous cure.

[2] Brit. Med. Journ., February 3, 1883, p. 207.

LIST OF CASES.

A. *Fatal without Operation.*

1. Verduc (Malgaigne, *Des luxations*, p. 149); artery wounded; no treatment; death by hemorrhage.
2. Petit (Malgaigne, *Des luxations*, p. 149); artery wounded; no treatment; death by hemorrhage.
3. Pelletan (Malgaigne, *Des luxations*, p. 149); artery wounded; puncture; death by hemorrhage.
4. Platner (Malgaigne, *Des luxations*, p. 149); artery and vein; death by hemorrhage.
5. Leudet (Malgaigne, *Des luxations*, p. 149); artery; 57 years. Dislocation 11 days.
6. Froriep (Malgaigne, *Des luxations*, p. 149); vein; 26 years. Dislocation 3 weeks.
7. Gibson, I., *Surgery*, i. p. 325; 50 years. Dislocation 2 months. Death in a few hours.
8. Price, quoted by Callender; vein. Death on following day.
9. Körte, I., *Arch. für klin. Chir.*, vol. xxvii. p. 631; artery; 25 years. Disloc. recent. Puncture.
10. Körte, III., *Ibid.*; artery; 52 years. Dislocation 5½ months. Rupture.
11. Mash (Carruthers, *Brit. Med. Journ.*, 1872, i. p. 526; artery; 38 years. Disloc. recent.
12. Hailey, *Ibid.*, 1863, p. 634; 59 years. Dislocation recent.
13. De Morgan, *Ibid.*, 1872, i. p. 54; 54 years. Dislocation recent. Incision.

B. *Ligature of the Subclavian.*

14. Green, *Lancet*, 1825, vol. viii. pp. 189 and 283; 33 years. Dislocation recent. Result unknown.
15. Warren, *Med.-Chir. Trans.*, vol. xxix. p. 25; 30 years. Dislocation recent. Recovery.
16. Gibson, II., *loc. cit.*, p. 334; 35 years. Dislocation 9 weeks. Death.
17. O'Reilly (Adams), *Cyclop. of Anat. and Phys.*, vol. iv. p. 616; 50 years. Dislocation recent. Recovery.
18. Nélaton, I., *Path. chir.*, ii. p. 368. Dislocation old. Death.
19. Rigaud, *Dict. Encyclop.*, art. Épaule; artery; 31 years; death.
20. Von Pitha (Körte), *loc. cit.*; artery; death.
21. Volkmann, *loc. cit.* Recovery.
22. Panas (Marchand, p. 52); artery. Dislocation recent; death.
23. Desprès, *Bull. de la Soc. de Chirurgie*, 1878, p. 116; artery; 40 years. Recent; death.
24. Gärtner, *Schmidt's Jahrb.*, 1871, vol. cli. p. 304; artery; 20 years. Recent; death.
25. Létiévant, *Bull. de la Soc. de Chir.*, 1884, p. 748. Recent; recovery.
26. Lefebvre, *Ibid.*, p. 750; artery; 52 years. Recent; death.
27. Cras, *Ibid.*, p. 739; 45 years. Recent recovery.

C. *Double Ligature—all fatal.*

28. Callender, *St. Barthol. Hosp. Reports*, vol. ii. p. 96; artery; 61 years. Dislocation old.
29. Wutzer, *Arch. für klin. Chir.*, vol. x. p. 308.
30. Körte, II., *loc. cit.*; artery; 29 years. Dislocation recent.
31. Lister, *Edin. Med. Journ.*, 1873, p. 829; artery; 58 years. Dislocation 8 weeks.
32. Rivington, *Brit. Med. Journ.*, 1872, i. p. 420; artery; 71 years. Dislocation recent.
33. Sheffield Inf., *Ibid.*, 1883, i. p. 207; artery; 62 years. Dislocation 6 weeks.
34. Baum, *Deutsche Zeitschrift*, 1880, vol. xiii. p. 177; artery and vein. Lig. of axillary (possibly double).

D. *Disarticulation at Shoulder.*

35. Jungken, *Arch. für klin. Chir.*, vol. x. p. 313; artery. Unsuccessful attempt to apply double ligature; recovery.
36. Bell (Malgaigne and Callender). Death.
37. Ledentu, *Bull. de la Soc. de Chir.*, 1877, p. 187; artery. Dislocation recent; death.
38. Bellamy, *Lancet*, 1880, ii. p. 260; artery; 55 years. Dislocation 7 weeks; death.

E. *Recovery without Operation.*

39. Desault, *Œuvres Chirurgicales*, vol. i. p 380; 60 years. Dislocation 1½ month.
40. Malgaigne, *loc. cit.*; 44 years. Dislocation 2 months.
41. Anger, *Bull. de la Soc. de Chir.*, 1878, p. 122; 54 years.
42. Nélaton. II., *Ibid.*
43. Agnew, *Phila. Med. Times*, 1873, p. 721; 60 years. Dislocation 6 weeks.
44. Sands, *Med. Record*, 1880, p. 45; 84 years. Dislocation 7 weeks. Autopsy in the proceedings of the New York Surgical Society, May 26, 1885, in this number of THE NEWS.

DISINFECTANTS.

PRELIMINARY REPORTS OF THE COMMITTEE ON DISINFECTANTS OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

XI.

COMMERCIAL DISINFECTANTS No. 2.

BY GEORGE M. STERNBERG, M.D.,
SURGEON U. S. A.

THE following named "disinfectants" have been tested, under my direction, by my efficient laboratory assistant Dr. A. C. Abbott, of Baltimore. The test in every case has been made upon "broken-down" beef tea by the method heretofore described in detail.

Several of the disinfectants which stand at the head of the list contain the potent germicide mercuric chloride, as shown by the simple test of introducing a polished piece of copper into the solution. A deposit of metallic mercury upon the surface of the copper shows at once the presence of a soluble salt of this metal. Those who have occasion to use disinfectants, the exact composition of which is not made public, will do well to bear this in mind, and to remember also that the germicide power of such solutions is neutralized by contact with lead, copper, or tin, and that lead pipes are injured by passing

through them solutions of corrosive sublimate in any considerable quantity.

	Per cent. in which active.	Per cent. in which failed.
Dr. Martin's "Disinfectant No. 1" (contains mercuric chloride)	2	1
"Thymo-cresol," English preparation, name of proprietor not given	2	1
"Withers Antizymotic Solution" (contains mercuric chloride)	4	2
"Pasteur's Marvellous Disinfectant,"[1] Blackman Disinfectant Co., of New York (contains mercuric chloride)	4	2
"Purity," Egyptian Chemical Co., Boston	40	20
"King Disinfectant," Humiston Manufacturing Co., New Haven, Conn.		50
"Sanguantræ," P. W. Manning, Stoneham, Mass.		50
"Phenoline," Hance Brothers & White, Philadelphia		50
"Golden Purifier," Thomas & Thompson, Baltimore		50
"Smith's Odorless Disinfectant," The Louis Smith Co., N. Y.		50
"Disinfecting Powder," G. L. Kidwell, Georgetown, D. C.		50
"Thymo-cresol Powder," English preparation, name of proprietor not given.		50
"Chloridium," Chemical Vaporizer and Deodorizer Co., of New York		50
"Carbolcrystal Disinfectant," H. H. Childs, proprietor		50

Dr. Abbott has also tested for me the different preparations of chloride of lime, and of Labarraque's solution which we have been able to obtain in the Baltimore market, with the following result.

Chloride of Lime.	Per cent. of available chlorine.
Brookman Manufacturing Co., Chicago	33.50
Risley & Co., New York	28.40
Rock Hill Alkali Co., Liverpool	28.00
Clagett Bros	24.10
Labarraque's Solution (liquor sodæ chlorinatæ).	
Reed & Carnrick, New York	3.80
Parke, Davis & Co., Detroit, Mich.	2.75
Powers & Weightman, Philadelphia	2.62
Hance Bros. & White, Philadelphia	0.35
Alonzo L. Thompson, Baltimore	0.013

[1] A preparation bearing the same name, reported upon in previous report upon commercial disinfectants, did not contain mercuric chloride and failed at 20 per cent.

NOTES ON PROFESSOR UNNA'S DERMATOLOGICAL PREPARATIONS.

BY ROBERT B. MORISON, M.D.,
PROFESSOR OF DERMATOLOGY AND SYPHILIS IN THE BALTIMORE POLYCLINIC.

THE idea of dermatologists for a long time past has been to find a means of making applications to the skin, which while containing the proper ingredients, would be manufactured in a form most comfortable to the patient. The inventions of Prof. Unna are a great step forwards in this direction. What recommends them, is their ease of application, their cleanliness, their durability, the comfort they afford the patient, and their efficacy in effecting a cure. There are other remedies which will cure as well, but up to the present time nothing has been invented in the author's experience which so well answers their purpose as these elegant preparations.

Short notes of a few cases taken from many are given in this paper to illustrate how they may be used in almost every form of skin disease.

CASE I.—Mrs. R., æt 60, has had chronic eczema of face, legs, and arms for many years. After trying ung. salicyl. five per cent. for some time with benefit, a fifty per cent. plaster of ac. salicyl.[1] was applied to the arms. It began to burn so, it had to be removed in ten minutes. The lead plaster[2] (salbenmull) was used however with great relief, though the arms were not cured entirely until the ordinary rubber bandages were used upon them. In places where eczema appears in small patches the plasters are especially useful.

Having found the action of the fifty per cent. plaster so intense I wrote to Mr. Beiersdorf to send me some five per cent. and ten per cent. salicylic acid plasters. They proved to be gently stimulating, sticking firmly to the skin, and soothing to the itching.

CASE II.—Mrs. M. showed two spots of eczema on back of neck which were about three centimetres in diameter. They had lasted four years, and had been treated with almost all known salves as well as with Prof. Pick's salicylic gelatine five per cent. The latter acted very well, but was so uncomfortable to the patient by catching in the dress and pulling upon the hair it had to be given up. The plasters were then resorted to. First, the spots were covered with a fifty per cent. salicyl plaster which was kept on for twenty-four hours. Upon its removal the spots were much irritated, were quite painful, but the itching had disappeared and their scaly appearance changed to a bright red color. The ten per cent. plaster was then applied, and while it has soothed the itching it has hastened the cure. The case is progressing most favorably.

CASE III.—A young man from the country with psoriasis orbicularis et punctata universalis, which had lasted one year, increasing from a few spots on his arms so as to cover the greater part of his body. Treatment was begun with Pick's chrysophanic acid gelatine ten per cent. It acted very well, but owing to the intense heat prevailing at the time, and the profuse perspiration of the patient which either softened or melted the gelatine, it was discontinued. Chrysophanic acid eighteen per cent. plasters were then applied, the pieces being cut just large enough to cover each spot. The patient applied the plaster himself to all places excepting his back, which part was kindly attended to by my assistant, Dr. Keyser. It is hardly necessary to say that the scales covering the spots were of course first scraped or washed off. There were over two hundred spots to cover, but after the first application much time was not required, since a renewal was only needed when a piece fell off. The patient spent two weeks in a private hospital in the city enjoying himself visiting his

[1] These plasters are made in Hamburg, and consist of a thin layer of India-rubber spread upon muslin, and upon the rubber the medicine is spread. They come all prepared for application and may be cut into any size.

[2] These plasters differ from the others in having no India-rubber, but consist of the common ointments, such as lead, zinc, white precipitate, etc., spread upon muslin. They come in rolls, can be cut into any sized piece, and they keep indefinitely.

friends, going to the theatre, and conducting himself as if he were not peppered over with medicated plasters. At the end of that time he returned home cured, with a package of plaster in his valise and a grateful heart in his body.

CASE IV.—Female child, eighteen months old, had eczema of cheeks with scattered spots on the arms and legs since birth. In this case the salicyl gelatine, five per cent., acted for a time very well, but its application becoming distasteful to the child the parents asked me to stop it. The lead and vaseline muslin plaster was ordered, and proved satisfactory. The child is entirely well.

CASE V.—Mr. ——, æt, 70. Chronic eczema of the left palm for seven years. Has tried every known salve and wash. Thinking it useless to go through the list again, I first softened the skin with a ten per cent. salicylic ointment and then applied ten per cent. salicyl gelatine. The gelatine proved an uncomfortable application for such a surface and was consequently given up. A piece of salicyl plaster, fifty per cent., was then applied and left on forty-eight hours, with the result of removing the whole of the upper surface of the skin. A ten per cent. plaster was then ordered and the patient's hand was more comfortable than it had been for many years. This treatment, viz., the application of the strong and then the mild plaster has been repeated several times, the hand being in a fair way to recover ultimately.

CASE VI.—Mrs. S., æt. 50, has suffered with eczema of the fingers for five years. The same treatment as in Case V. was repeated, the fingers being wrapped first in the strong plaster, and then in the mild. The result was still better, for there was a complete cure in six or seven weeks.

CASE VII.—Mrs. D., æt. 45. Tylosis of the hands and feet of three years standing. The epidermis was tough, thick, and unhealthy looking, the extremities cold. The patient was of a very nervous temperament, and disliked applications of any kind. She was persuaded to try the plasters, and although benefited for a time would not persist with them. The most satisfactory part of this case was the disappearance of a large and painful corn between the little and next toe of the left foot by the application of the fifty per cent. salicyl plaster for forty-eight hours. The corn was easily removed after the plaster. This result coincides with my experience in other cases of corn, in which the plaster has been used with most satisfactory result. The first effect of the plaster under such circumstances is to make the part rather tender, but the second effect after the removal of the corn is a feeling of great relief which lasts longer than when the corn is extracted or shaved off immediately. In one case the corn has given no trouble for six months and still lies dormant. It is well known that salicylic acid enters into many patent corn solvents, but none seem so beneficial as the above-mentioned plaster.

CASE VIII.—Mr. R., æt. 23, has had a chronic eczema of the third finger of the right hand every winter for fourteen consecutive winters. The plasters of salicylic acid were applied as above and a cure effected in three weeks which has been lasting.

CASE IX.—Mr. S., æt. 38. Has had chronic eczema of the scrotum and inside the thigh for many months. Oxide of zinc muslin plaster was ordered and kept upon the parts for two weeks with marked improvement. Lead and vaseline muslin plaster was then used for a week and the disease appeared cured. After a few weeks, however, the patient fearing return of the trouble on account of the itching consulted me again. A ten per cent. salicyl plaster was applied during forty-eight hours. It caused some soreness, which was however immediately relieved by the use of the lead muslin plaster, and the patient is now entirely well. The ten per cent. salicyl plaster was stimulating enough for such tender parts, especially as the man was compelled to be walking all day long.

CASE X.—Miss P., æt. 16, has had a disfiguring, dry chronic eczema of the cheeks for several years. Has used all kinds of ointments. I ordered for her lead and vaseline muslin plaster for the face, to be applied only at night, as she had to go to school every day. She had also a chronic eczema of both legs as far up as the knees. An ointment of salicylic acid, five per cent., in vaseline, was prescribed for it. She returned in a week very much improved, and was not to return again unless the disease became worse. It has been two months since she has been seen personally, but friends of the patient have reported most favorably.

CASE XI.—Mr. S., has had psoriasis orbicularis of right elbow for a year with psoriasis punctata of head and palms. Chrysophanic acid plaster, eighteen per cent., was ordered for the elbow and palms. The disease has disappeared from the elbow in two weeks, but the hands on account of their being in constant use were not well covered with the plaster and consequently are still diseased. Several small spots on the wrists where the plaster did stick have disappeared. A pomade of white precipitate ointment was used for the head with much benefit.

These are some of the cases from private practice in which the various plasters have been used.

Unfortunately their cost is so great that when they reach this country they cannot be used extensively in dispensary practice. A piece of plaster which costs fifty cents in Hamburg, must bring more than twice that amount to pay the extortionate duties which our government demands, besides the express and profit to the importer.

The plasters have been found useful however in several cases at the Polyclinic Dispensary, and their use would have been more general if their cost had corresponded to cheaper applications. In some cases patients have been willing to buy them rather than return to the ordinary remedies.

One case of lupus vulgaris in a girl æt. 14, has been greatly benefited by the forty-five per cent. pyrogallic acid plaster. The disease extends over both cheeks, the upper lip and nose. The septum nasi was perforated when she first came to the dispensary, and the whole face was a mass of ugly scabs and ulcerations. At present the face is covered with healthy looking epidermis, although there are underneath it many lupus nodules still remaining. As the patient lives in the country and cannot come

often to town the treatment must necessarily be of long duration.

Among the others a case of ainhum was interesting. The patient, a negro æt. 42, had lost the little toe of the right foot from this disease two years before. He came to the dispensary to have the little toe of the left foot removed because it was very painful and an operation on the right little toe had relieved him previously. The toe presented the usual appearance of ainhum—a deep constriction with an enlarged toe beyond. It was so sensitive it could not be touched without intense agony, the pain running far up the leg, while the man in walking suffered with every step. Having noticed the anæsthetic action of salicylic acid in the treatment of corns, and not wishing to remove the toe immediately, I put a strip of the fifty per cent. salicyl plaster round the constriction, gave the patient a ten per cent. salicyl acid ointment, which he was to apply if the plaster came off, and I told him to return in two days. To the surprise of everyone, when he did return he said his toe was all right and he would not take off his shoe until solemn promises were made that I would not cut it off. When his foot was bare he took hold of the diseased toe himself and moved it all about without pain. I also moved it in all directions without any evidence from the patient that he felt it. The constriction was still there, and altogether the appearance of the toe had not changed in the slightest. Amputation was advised but the man would not hear of it. He did not care if the toe did drop off of itself, all he wanted was relief from the pain, and this he got from the plaster and salve. He was given more of each, promising to return if the toe got painful. He has not been seen for four months. As he is a sailor by occupation, and goes from port to port, it is doubtful whether the final result will be known, but that the temporary relief was very great can be well understood, since the man, although he had before, suffered so much from the toe was sufficiently well satisfied with the plaster and salve to trust to their virtues rather than to undergo an operation which promised absolute removal of the cause, an operation which from past experience with the little toe of the other foot he knew would give him permanent relief.

These cases are sufficient to call the attention of the profession to Prof. Unna's plasters, which are indeed worthy of the highest praise for their neatness and ease of application.

MEDICAL PROGRESS.

PATHOGENY OF FETID ABSCESS OF THE LIMBS.—DR. G. NEPVEU proposes the following explanation as to the cause of fetid abscess of the limbs:

1. Fetid abscesses of the limbs are very rare, and are presented under various conditions:

a. In consequence of rupture of vessels which in certain pathological conditions contain bacilli, and by direct inoculation of the contaminated blood into the tissues, constituting anto-inoculation.

b. In consequence of entrance into the tissues of bacteria, originating externally (from wounds, etc.). Under this head may be included their direct incarceration in the tissues, which is brought about by means of a granulating membrane.

2. The persistence of bacteria, or their origin from incarceration, is indubitable; in cases under the author's observation, they have been seen at the end of fourteen and of ten years.

3. Traumatism may have the effect of producing serious septic (bacterian) inflammation, viz., phlegmon and fetid abscess by a veritable inoculation of the peripheral tissues.

4. Long incarceration confirms the opinion that the bacteria are the real and only cause of the extreme fetor which is characteristic of these abscesses.—*Gazette Médicale de Paris*, April 25, 1885.

THE ACTUAL CAUTERY IN OCULAR THERAPEUTICS.—DR. TURAZZA, in the *Gazzeta degli Ospitali*, of May 6, 1885, after discussing the indications for the use of the actual cautery in ocular therapeutics, cites the conclusions of Lavallée upon the same subject:

1. Cauterization is an excellent method for the cure of benign ulcer of the cornea which has become indolent, and also against rodent ulcer.

2. It is non-efficient in the serpiginous ulcer of hypopyon.

3. It may be used in suppurative or phlyctenular keratitis with threatened corneal ulceration, in partial opaque staphyloma, and in simple hernia of the iris.

4. Its use has not been sufficiently studied in vascular parenchymatous keratitis, in leucoma, ciliary blepharitis, and in granular conjunctivitis.

5. It arrests the accidents consecutive to septic infection from a wound of the cornea made under treatment.

6. It produces favorable results in entropion and lachrymal fistula, and gives encouraging results in non-cicatricial ectropion.

6, It combats efficiently the return of pterygium and of cicatricial fleshy growths.

8. It is well tolerated by the conjunctiva and eyelids, and gives good results in chalazion. It replaces, for the most part, cutting instruments in the removal of tumors of the conjunctiva and eyelids.

9. It does not cause serious reaction, is not painful, is limited in its action, destroys septic elements, produces an irritation favorable to cicatrization, and causes rapid cessation of pain in ulcers, abscesses, and phlyctenulæ of the cornea.

10. The galvanocautery, modified by Abadie, combines the best conditions for the application of the new method.

To obtain the best results by cauterization a reddish-brown color is recommended to be maintained in the cautery; moreover, the degree of incandescence should be proportioned to the moisture of the part.

DIVULSION OF THE CARDIA.—PROFESSOR LORETA, on the 21st of March, 1885, performed double digital divulsion upon a girl, aged 19 years. The patient was brought to Prof. Loreta sufferring from cardiac stenosis, for which he intended to practise dilatation, but, the abdomen having been opened, he discovered that the constriction extended to the pyloric orifice of the stomach, which necessitated the operation of

divulsion. The condition of the patient at the conclusion of the operation and for some time after, was exceedingly precarious, but at the present time a favorable result is anticipated. The other two patients upon whom the operation was performed are entirely cured.—*Gazzetta degli Ospitali*, May 26, 1885.

STRANGULATED INGUINAL HERNIA NOT TREATED; STERCORACEOUS FISTULA; ENTERORRHAPHY; CURE.—M. SÉVIER, at a meeting of the Société de Chirurgie de Paris, held March 18, 1885, gave the history of the following case:

A man, twenty-four years of age, had had from the time he was three years of age a left inguinal hernia, for which he had worn a bandage until he was fourteen. Since that time the hernia had remained only partially reducible, in the condition of a bubonocele. After a fit of indigestion the hernia became increased in volume, and showed all the ordinary signs of strangulation. Purgatives were administered. For two months, according to the patient's statement, there was no intestinal movement, and no passage of flatus. His diet consisted entirely of soups, which were vomited with other matter of disgusting taste. At the end of two months a fistula was spontaneously established, and three months later fecal matter again commenced to pass per rectum in gradually increasing quantity, although the fistula still persisted and continued to discharge fecal matter of varying consistency. The general condition of the patient was good. Enemata were immediately discharged by the fistula, and digital examination rendered it probable that the fistula communicated with the sigmoid flexure. After having tried without success to close the fistula by a skin operation, M. Sévier made an inguinal incision, circumscribing the lesion, mobilized the intestine without opening the peritoneum, and introduced sutures of silk into the mucous surface, after the method of Lembert. A second row of sutures united the edges of the fistula, comprising also the separated fibrous tissues. Corrosive sublimate dressing was applied. Flatus passed the same day per anum, and by the eighth day union was sufficiently advanced to permit the dressing to be dispensed with.

The patient at present is entirely well, requiring only a bandage to support a small hernia situated at the superior part of the cicatrix.

The mildness of the symptoms produced subsequent to the strangulation of the bowel, is phenomenal, and can only be explained by the location of the portion of the intestine involved, the sigmoid flexure of the ileum.—*Revue de Chirurgie*, April, 1885.

TREATMENT OF PNEUMONIA BY COLD BATHS.—M. CHARNIER, after extended observation upon the effect of cold baths in the treatment of pneumonia, gives the following summary of his opinion as to their efficacy:

1. Cold baths are never dangerous in pneumonia at whatever period they may be employed.

2. They diminish the temperature, slow the heart, cause the bruits produced by the fever to disappear, ameliorate the dyspnœa, and allay thirst, thus permitting more abundant alimentation.

3. Having experimented only with cases which might have been cured without treatment, M. Charnier does not decide whether by their use the mortality of the disease is diminished; nevertheless, he inclines to the opinion that such is the case.

4. With adults, to obtain lasting relief, the baths should be given every two or three hours.—*Journal de Médecine de Paris.*

HYDRO-PNEUMO-PERICARDITIS PRODUCED BY AN ULCER OF THE STOMACH.—At a recent meeting of the Société des Hôpitaux, M. MOIZARD gave the history of a case of hydro-pneumo-pericarditis caused by ulceration of the stomach.

He referred to the history of the pathognomonic symptom of the lesion, the *bruit de moulin* or windmill bruit, referred to originally by Laennec, and since his time by various French authors. Two varieties of the *bruit de moulin* are to be recognized. The first is consecutive upon certain traumatisms of the præcordial region, and is characterized by the disappearance of the bruit when a sitting posture is assumed; its prognosis is benign, and cure is the rule.

The second confirms the presence of gas and of liquids in the pericardial cavity, and does not disappear when the patient sits down; in this condition death is the rule.

The patient, whose history Dr. Moizard reported, was a woman 56 years of age, who entered the hospital with violent epigastric pain, and presented a cachectic appearance so marked that cancer of the stomach was suspected. Nothing abnormal was heard on auscultation of the heart. Some time subsequently a metallic bruit was noticed, the patient, however, showing no signs of palpitation or dyspnœa. The day following there existed a typical *bruit de moulin*, perceptible over the whole anterior thoracic region and not disappearing when the patient was placed in a sitting posture. The præcordial region was tympanitic in resonance. There was no dyspnœa, but in a short time the pulse began to increase in frequency and nausea supervened followed by cold sweats and collapse and death.

At the autopsy a perforation of the stomach was found situated at the region of the greater curvature, and whose edges were closely adherent to the diaphragm. The ulcer measured three inches in diameter, and free communication existed through the perforation between the stomach and pericardial cavity. The pericardium was also adherent to the diaphragm.

The only cause of the perforation of the stomach was the ulcer, there being no evidence of cancerous degeneration.—*L'Union Médicale*, May 12, 1885.

AMMONIACAL DISKS AS VESICATORIES.—DR. GUIDO TURAZZA, in recommending ammoniacal disks for vesication, claims the following advantages:

1. Ease of application, moderate cost, and a duration of pain much shorter than that produced by actual blisters.

2. They produce in a short time the remedial effect of blisters, and may be used in cases where a speedy result is desirable, thus possessing an advantage over blisters and being far superior to sinapisms and cupping glasses.

3. They may be used in cases in which blisters are contraindicated on account of the danger of toxic effects.—*Gazzetta degli Ospitali*, May 3, 1885.

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THE PREALBUMINURIC STAGE OF CHRONIC BRIGHT'S DISEASE.

IT has long been known that in the form of chronic Bright's disease known as interstitial nephritis, not only is the albumen as a rule small in quantity, but even at times altogether absent. In like manner, casts are scanty and sometimes totally wanting; so, too, it has long been recognized that this disease may exist for some time undiscovered, even until the convulsions or apoplexy, which are such frequent modes of its termination, usher in the end.

Recently, however, increased attention has been called to the fact of the insidious presence of this disease in a large number of cases, a long time before albumen is discovered, and even where pains are taken to look for it, and that the disease may run its course from beginning to end without the presence of albumen.

This being the case, increased effort has also recently been made to point out symptoms by which the presence of contracted kidney may be recognized independently of albuminuria. Conspicuous among writers attempting this has been the late DR. MAHOMED, of London, and recently DR. CHARLES W. PURDY, of Chicago, read an excellent paper on this subject before the Chicago Medical Society.

Seeking for such symptoms, Dr. Purdy first points out the fact that renal cirrhosis is most frequently developed after middle age, the largest number of cases occurring between 41 and 50 years, and the next between 51 and 60.

Second, it is found most often in persons who live generously, eating largely of highly seasoned and flavored meat food, and drinking freely wines and other alcoholic liquors.

Third, as to the cutaneous system, he calls attention to a peculiar pallor of the skin characterized by Dickinson as the *pallor luteus*, an appearance somewhat anæmic, though a sort of sunburnt tinge obscures the pallor. Deficient perspiration is also named as a common accompaniment of early cirrhotic disease, producing a dry, harsh skin. Erythema and acne rosacea may occur, but generally later.

Fourth, is diminished muscular power, manifested by weakness and indisposition to exertion characteristic of the disease in its more advanced stages. Emaciation is also occasionally present.

Fifth, dyspepsia, especially of the flatulent kind, is said to be one of the most constant of the symptoms of this form of renal disease in the absence of albuminuria. Loss of appetite and nausea, especially in the morning, are also frequent.

Sixth, of pulmonary symptoms, dyspnœa, so constant in advanced stages of contracted kidney, is also included by Dr. Purdy among those which precede albuminuria, as is also bronchial catarrh.

But the most invariable of these prealbuminuric symptoms are those connected with the vascular system. They are hypertrophy of the left ventricle and high vascular tension. We will not stop to discuss the rationale of their production. The former is recognized by its violent action and heaving impulse, and the latter by its hard, unyielding character; but it is best recognized by the sphygmograph, which has one of its most important practical applications in the recognition of this condition. The peculiarity of the high tension of renal cirrhosis is found in the fact that if a line be drawn from the apex of the up-stroke to the bottom of the aortic notch it intersects the descending stroke; whereas in the normal pulse no part of the tracing rises above this line. The aortic notch itself is higher than usual, and the length of that part of the basal line which indicates the duration of systole is also greater.

Retinal changes also precede the albuminuria of contracted kidneys, the most frequent being the white spots and patches due to degeneration. The changes in the arteries of the retina pointed out by Gowers, a narrowing of the lumen, independently of other evidence of retinal disease, may also be present.

Finally, polyuria, in which the urine at first has a higher specific gravity than normal—1020 to 1035—the urine of advanced contracted kidney is well known to have its specific gravity diminished—may precede albuminuria. Such urine is also apt to contain crystals of urea and oxalate of lime, and may strike the blue hæmoglobin reaction with peroxide of hydrogen solution and tincture of guaiacum.

It is evident, however, that there are very few of

the above symptoms which may not be present in the economy quite independently of any renal disease, and therefore, they are of uncertain value in diagnosis. The most important of these are the symptoms connected with the vascular system and the retinal changes, together with the habits of living. The remainder are, indeed, more frequently due to other causes, and retinal or vascular changes do not coexist.

We still hold that a certain diagnosis without albuminuria is impossible. Indeed, it seems scarcely justifiable to consider some of the symptoms referred to as characteristic, as, for instance, the pallor. We are quite certain that, in the cases of contracted kidney which have been under our observation, even when albuminuria has been established, the large majority have exhibited a ruddiness of complexion and color which are the very opposite of anæmia.

The importance, however, of a full knowledge of this subject cannot be overrated, and we are especially indebted to Dr. Purdy for calling attention to the symptoms of the prealbuminuric stage in a systematic manner.

RUPTURE OF THE VAGINA FROM COITUS.

THE subject of tears of the vagina in coition derives special interest from some recently published cases of this accident. That the vagina can be thus torn has been denied by some, while others have expressed doubt as to whether a serious hemorrhage could be thereby caused. For example, Breisky, in Billroth's *Handbuch*, observes that the fact of brutally performed coition causing fatal injury is doubtful. He quotes Hoffman, who questions whether, even in raped children, the vaginal tears are to be attributed to coition, but rather to rough manipulation. A similar doubt is also expressed by v. Preuschen, *Real Encylopädie der Gesammten Heilkunde.*

The older authors reported cases of the accident where death occurred, rejected indeed by Breisky, but which are indirectly confirmed by recent observations. Even the remarkable case given by Demerbroc does not seem impossible. A bride after the first coitus had such a violent hemorrhage that Diemerbroc says: "ut intra tres horas una cum virginitate etiam vitam amiserit."

The Centralblatt für Gynäkologie, of February 21, 1885, contains the report of a dangerous hemorrhage from a rent of the hymen in coition, and one of rupture of the vaginal vault from the same cause; these cases are given by Dr. Zeiss, of Erfurt. In the first, Dr. Zeiss did not see the patient until 4 P.M., the day succeeding the night of the accident. He found her pulseless, pale, bathed in a cold sweat, and a pool of blood about the thighs, sides of the pelvis, and back. After the removal of the blood he found two rents of the hymen, one on each side, and from the left which extended to the vaginal attachment of the hymen, a continuous stream of blood was pouring from a torn artery. The suture was used to arrest the hemorrhage, and by stimulants reaction was accomplished. The suture was removed on the third day, and there was no recurrence of the bleeding.

The second case was one where a married woman who had borne a child a few weeks before, had her vagina ruptured by coition, which was *a la vache.* In this woman the uterus was strongly retroflexed, and the cervix hard and fixed at the right side, and upon this side of the vault there was a tear large enough for the finger to enter readily.

Dr Chadwick, in the *Boston Medical and Surgical Journal*, April 30, narrates a case of vaginal rupture occurring in a woman forty-eight years of age, who had been married six years to a sailor, and cohabitation had occurred freely without difficulty or pain. Her husband returning after four months absence, intercourse took place causing a rupture an inch long, in the upper third of the vagina, opening into the connective tissue. In the same journal for May 14, Dr. Mundé reports two cases of dangerous hemorrhage from rupture of the vagina in coitus; these cases had been previously reported, and their repetition was suggested by Dr. Chadwick's paper. Both of Dr. Mundé's patients had been married the previous day; in one the rent was an inch long, and began at the hymen; in the other it was on the left side of the vagina, fully two and a half inches in length, half an inch deep, and extended from about an inch above the hymen nearly to the vaginal vault. The length of the vagina in the second patient was extraordinary, its side measuring apparently not less than four inches. The hemorrhage in each case was arrested by tamponing.

The London Medical Times and Gazette, vol. i., 1860, contains the record of a case operated on at the Samaritan Hospital, by Sir Spencer Wells, where rupture of the recto-vaginal wall occurred at the consummation of marriage.

Dr. Ross reports in the *Canada Medical and Surgical Journal*, 1877, the case of a patient in the Montreal General Hospital sixty years of age, with rupture of the vagina; her husband, seventy years old, had been absent nine years, and returning insisted upon coitus, which caused violent pain, and an exhausting hemorrhage that came from a rent an inch long in the upper part of the vagina, just behind the cervix.

Kleinwächter, in the *Wien. med. Presse*, 1880, reports a case of rupture of the vagina occurring from violence during sexual intercourse. The subject, twenty-two years of age, was brought to the clinic in an unconscious condition, underclothes, abdomen, and legs covered with blood, and bleeding from the vagina. Upon examination, the labia majora and

minora were found œdematous, the perineum greatly swollen and discolored; the posterior wall of the vagina had a triangular tear, the base of the triangle being below, the length of the wound from above down was two inches. In this case it is believed the injury resulted from the use of the fingers or hand.

The Indian Medical Gazette for 1872 contains the report of a case in which a native drugged his wife, who had not yet reached puberty, and then had intercourse with her. She died of hemorrhage, and a post-mortem showed a rent one inch and a half long in the posterior wall of the vagina and the perineum torn to the anal sphincter, and a second rent in the anterior wall close to the cervix.

The Gazette of the same year also contains the report of a case where an English officer had intercourse with a girl between eleven and twelve years of age. She died from loss of blood, and a rent in the vagina, including the fourchette and extending two inches in a longitudinal direction, was found.

It will be seen from some of these cases that there may be a fatal hemorrhage even from coition, in others at least a dangerous bleeding, while in one probably the injury to the vagina was done, as suggested by Breisky and Hoffman, by the hands.

A WORD OF WARNING.

JUST about this time multitudes of people are laying their plans for the summer vacation, and are casting about for a spot for a brief sojourn away from home. To such, a word of caution with regard to the importance of investigating the sanitary arrangements of their proposed summer resting-place, before making a selection, will not be out of place.

Before choosing a summer home it is usual to inquire particularly about the situation of the house, the eligibleness of the rooms, the character of the service, the quality of board, and the class of guests entertained, and very properly so; but none too frequently is a question asked or an inquiry made with regard to the water-supply or the drainage arrangements, both subjects of paramount importance to health. Fortunately, the proprietors of public houses are being forced to realize their responsibility to the public, and are now giving more attention than ever to matters connected with the health of their patrons. If the public patronized no house which is not provided with pure water and a perfect system of drainage, these essential features of a healthy habitation would soon be supplied.

The results of the summer vacation are often most disastrous. For the want of exercise of common prudence and foresight, many a one, who has left home in search of health or recreation, has been overtaken by preventable disease, or has returned with the seeds of some malady already implanted in his system. Beauty of location, salubriousness of climate, comforts and conveniences, and pleasant society are not to be undervalued, but they count for naught if the air and water-supply are poisoned through defects in the drainage system. Without perfect drainage and wholesome water, the safety of no locality can be insured, however attractive it may be in other respects. It is, therefore, the duty of every one seeking a summer resort for his family, to make diligent inquiry on both these points, and to satisfy himself that there is nothing wrong about either of them, before coming to a decision. If this is not done, the responsibility of having exposed the health of his loved ones to serious risk will rest largely upon his own shoulders.

A word of advice should also be directed to the keepers of seaside watering-places, and country and mountain resorts. Now is the time for them to correct defects and supply deficiencies. In a short time they may expect to be questioned shrewdly as to the sanitary advantages of their houses. If they have been negligent in providing everything necessary for the health of their guests, they may expect to lose patronage, and deservedly so. The business of a season and the reputation of a house have been destroyed by the occurrence of sickness due to inattention to these important matters. But a higher motive should actuate them to comply with the requirements of sanitary law. The dictates of humanity and honesty forbid that advantage should be taken of their patrons by offering accommodations professedly safe, when no effort has been made to guard them from dangers which lie concealed from view, and of which they have had no means of gaining a knowledge.

MILK DIET IN THE ALBUMINURIA OF PREGNANCY.

TARNIER'S treatment of the albuminuria of pregnancy by an exclusive milk diet has counted in his hands, as well as in those of others, many successes, and it has received a very strong endorsement from Charpentier, among recent obstetric writers. Under this treatment it is usual to see the albumen lessen, in some cases disappear, and the symptoms which threaten eclampsia, such as headache, dimness of vision, indisposition to exertion, and drowsiness, cease, or become much mitigated. In some cases, however, it is important to conjoin with milk diet a hot bath once in three or four days. The temperature of the bath should be from 98° to 100°, and while in the bath or immediately after it, the patient should drink a tumbler of hot milk. A profuse perspiration usually follows, and the relief is prompt and positive. In one case, however, now under our observation, a primigravida now in the eighth month, who has had albuminuria for at least four months, and who derives marked benefit from the hot bath, has also a very serious discomfort following it. There is unusual and violent activity of the fœtus

always occurring after the bath, so that she is for some hours unable to sleep,—a very serious inconvenience, as the usual and most favorable time for the bath is just before retiring.

Valuable as most practitioners regard the milk treatment of the albuminuria of pregnancy, some entirely reject it. Pajot, for example, in a recent discussion held at the Paris Obstetrical and Gynecological Society, and reported in the *Journal d'Accouchements*, May 5th, refers to it as a bitter pleasantry. One of his arguments against the milk treatment is that infants from six months to the end of the first year, are peculiarly liable to eclampsia, and yet they are then on milk diet. Guéniot very well answered this argument by saying that these infants that have eclampsia are not albuminuric, and the milk diet in albuminuric pregnant women does not act upon the eclampsia, but upon the albuminuria; it is only indirectly by curing the albuminuria that it renders eclampsia much rarer. It is impossible to attribute infantile and puerperal eclampsia to the same cause.

DIAGNOSIS OF GONORRHŒA IN THE FEMALE.

MARTINEAU, at a recent meeting of the Paris Obstetrical and Gynecological Society, stated a most important fact by which specific can be distinguished from simple vaginitis. It depends upon this that in the specific form of the disease the pus is always acid, while in the simple it is alkaline. It is very easy, therefore, to decide by a piece of litmus paper as to whether a woman is or is not suffering from gonorrhœal inflammation.

This sign will prove of value, too, in determining, when rape has been committed, whether the person committing the crime was affected with gonorrhœa, for then the vulvitis would be characterized by an acid discharge, while in the simple form of the disease the discharge is alkaline.

SOCIETY PROCEEDINGS.

OHIO STATE MEDICAL SOCIETY.

Fortieth Annual Meeting, held at Dayton, June 3, 4, and 5, 1885.

(Specially reported for THE MEDICAL NEWS.)

THE Society convened in Association Hall, and was called to order at 2 P.M. by THE PRESIDENT, DR. J. C. REEVE, of Dayton.

DR. W. J. CONKLIN, President of the Montgomery County Medical Society, in a few appropriate words, tendered the members a hearty welcome to Dayton.

DR. WEAVER, Chairman of the Committee on Arrangements, made a detailed report of the arrangements already made for this meeting, the order of exercises, receptions, and extended formal invitations to the members to visit the various charitable institutions located in and about the city.

DR. COLLAMORE, of Toledo, read

THE SECRETARY'S ANNUAL REPORT,

showing the following facts. In 1882 the membership of this Society was given as 540, of whom 13 were non-resident. Since then it has been increased by 79 new members, admitted at last meeting, and the restoration to membership of 4 old members, in all 83, while it has been diminished by 47 forfeited memberships, 8 deaths, and 1 expulsion—56 in all—showing a net gain of 27 members. The present enrollment is 567, of which 13 are non-resident members. It appears that during the past year seven of the auxiliary societies abandoned their organizations. It is a deplorable fact that there are at least 18 counties of the State in which there is no local medical organization.

DR. JONES, of Columbus, presented

THE TREASURER'S REPORT,

showing a balance of $477.82 in the treasury.

The Special Committee appointed last year to secure the passage of a bill by the Legislature creating a

STATE BOARD OF MEDICAL EXAMINERS,

reported at length, through Dr. Weaver, of Dayton. In order to secure the opinion of the profession throughout the State, the Committee sent copies of the bill, already endorsed by this Society, to every prominent physician, accompanied by a circular letter requesting a written opinion. The responses were very numerous and favorable. All of the local societies in the State, with one exception, endorsed the proposed legislation. The Committee worked energetically, but when the bill was put upon its passage it was defeated, and, singular to state, its defeat was due to the petty jealousies and opposition of the ten medical members of the Legislature, nearly all of whom had some bill of their own creation for which to work. After considerable discussion at various times during the session, it was finally agreed to continue the same Committee for another year, and to authorize them to draw from the treasury a sum not to exceed $500, with which to defray their necessary expenses.

DR. BALDWIN, of Columbus, reported that he had recently secured for the Society from Dr. J. B. Thompson, of Columbus, a

COMPLETE SET OF THE SOCIETY'S TRANSACTIONS,

believed to be the only complete one in the State. Dr. Thompson, whose death has occurred since making the gift, was a charter member of the State Society, and was its Treasurer for many years. It was subsequently agreed, upon recommendation of the Finance Committee, to whom the matter had been referred, that this set of *Transactions* be accepted, and, in accordance with the request of the donor, be placed in the State Library at Columbus.

The Secretary was instructed to place annually a copy of the *Transactions* in the same library, so the file may be kept complete.

THE ANNUAL ASSESSMENT

upon members for the ensuing year was fixed at one dollar.

DR. GILL, of Cleveland, Chairman of the Committee on

GENERAL COLLECTIVE INVESTIGATION OF DISEASE,

made a verbal report. The Committee had not matured a plan of action. After a long discussion, it was resolved to continue the same Committee for another year, and to authorize it to appoint an additional member from each county in the State to assist in the work.

DR. C. A. L. REED, of Hamilton, read a paper on

PELVIC HÆMATOCELE.

He took advanced views in its treatment. In view of the protracted nature of these cases, and the fact that absorption of the effused blood takes place slowly, if at all, and especially in view of the protracted and hazardous invalidism which generally ensues upon these extravasations, the position was taken that something should be done to control the initial hemorrhage. A case was given illustrating the dangers of too conservative treatment. Abdominal section and the ligaturing of both extremities of the broad ligament, so as to include all of the underlying vessels, was suggested as a possible expedient in desperate cases. The evacuation of the sac after the arrest of hemorrhage, and either before or after suppuration, is best accomplished by making an incision along the upper margin of Poupart's ligament, and elevating the peritoneum in cases in which the extravasation occurs beneath the fold of the broad ligament. A case was given in which the operation had been made with success.

DR. C. D. PALMER, of Cincinnati, followed with a paper on

A RARE COMPLICATION AFTER OVARIOTOMY.

The complication was the appearance of a *fecal fistula* twelve days after the operation. The fistula opened in the median line, midway between the umbilicus and the pubis, and seemed to be connected with the lower small intestine. The discharge, at first, amounted to about one ounce per day. The literature of this rare complication was exhaustively given by the author. The query was raised as to whether these fistulæ should be closed by operation or left to nature. The author advocated the latter course. Fatal results have followed the operation, and a very large majority of these fistulous openings close spontaneously within a year.

DR. MILLER, of Cleveland, and DR. DUNLAP, of Springfield, reported cases in which fecal fistulæ following ovariotomy have closed without an operation.

In the evening the members and their wives were pleasantly entertained at the Southern Ohio Insane Hospital by the trustees and officers.

THURSDAY, JUNE 4TH.—SECOND DAY.

MORNING SESSION.

THE COMMITTEE ON ADMISSIONS AND MEDICAL SOCIETIES

reported favorably on the applications of the Hempstead Academy of Medicine, of Scioto County, and the Lake County Medical Society, and the Columbus Medical Club, to become auxiliary societies. The application of the Midland Medical Society, of Fayette County, was rejected on the ground that the Code of Ethics of the American Medical Association is not specifically endorsed in its Constitution and By-laws. After considerable discussion an amendment to the Constitution was defeated, by which membership in the State Society could be acquired without first becoming a member of the local society.

DR. REED, of Mansfield, then read a paper on

VITILIGO,

in which he stated that Dr. McCall Anderson had only met with this disease four times in eleven thousand consecutive cases of skin disease. It is caused by a lack of the proper action of the nerves controlling the supply and distribution of the pigment. On examination under the microscope, it will be found that in some instances an increase of pigment takes place in the parts adjacent to the white spots, which gives rise to the peculiar mottled appearance of these patients. The author reported the histories of five cases which had occurred under his personal observation. He considered the disease incurable, but spoke favorably of the use of electricity.

DR. DAN. MILLIKIN, of Hamilton, presented a valuable paper on

EMPYEMA AND ITS TREATMENT BY DAILY ASPIRATION THROUGH A DRAINAGE-TUBE.

On theoretical grounds, he advocated the introduction of a small tube into the affected side of the chest, through which fluid should be aspirated and injected. He laid stress on the importance of keeping the opening air-tight, in order that there might be produced each day a partial vacuum in the chest; that vacuum to be maintained for upwards of an hour and thus solicit the expansion of the lung. The views propounded were illustrated with the brief histories of two cases in which it had been successfully carried out, though the reader stated that he merely approached the subject as a theorist, seeking for that which is not to be found in any accepted treatment, viz., some means of preventing the lung from going to destruction by reason of its own elasticity.

DR. P. S. CONNER, of Cincinnati, presented a paper on

VESICAL EXPLORATION.

He spoke of the frequent difficulty of diagnosticating correctly conditions of the bladder. Endoscopic examination, of some value in females, is almost useless as a means of interrogating the male bladder.

After considering the various modes of examination and emphasizing the fact that they are all unsatisfactory in certain cases, he urged a resort to perineal section in these cases. The danger is slight, and the great advantage which results from digital examination of the bladder is certainly evident. The operation and exploration are easy and satisfactory in thin subjects. Some French surgeons advocate the suprapubic method of exploration rather than that by perineal section. The author gave the preference to the latter method both on account of the safety of the operation and the greater ease with which the exploration can be made.

DR. S. C. AYRES, of Cincinnati, read a paper on

DIABETES,

giving two cases with interesting eye complications. In the first, there was an attack of amblyopia which lasted

about one month, during which time the patient suffered severely with headache. The optic disks were blanched, but vision in the right eye was good, while that of the left was considerably impaired. The urine was loaded with sugar. In the second case, there was acute papillitis of both eyes, with marked impairment of vision. There was also occasional attacks of pain in the head with vertigo, followed by nausea and vomiting. He was under the care of Dr. Sharp, of London, who put him on the arsenite of bromine, under which rapid improvement took place. The patient was present and was examined by many of the members. Ophthalmoscopic examination showed atrophy of the optic nerve—his vision was greatly impaired.

AFTERNOON SESSION.

THE PRESIDENT'S ADDRESS.

DR. REEVE dealt with medical history and questions of medical politics. The subject was *The Latest Systems in Medicine.* These were the systems of Brown, of Broussais, of Rasori, and of Hahnemann. Each was briefly sketched in its leading features. Then was considered the influence exerted by each on therapeutics. A potent factor in causing the acceptance of homœopathy was held to be the abuse of bloodletting by the profession, and a sketch was given of this sad page in the history of medicine. The claim of homœopathists that the entire reaction was against this abuse, and the institution of a milder form of treatment was then considered and refuted. All progress was in that direction, and the names of Graves, Louis, Laennec, Marshal Hall, and Forbes, with Minor, and Tully, and Bigelow were mentioned in this connection. The changes introduced into the practice of homœopathy since Hahnemann's time, were then briefly alluded to, and by quotations from writers of that school it was shown that there were the widest differences of opinion among them upon leading points of their creed. So varied are these opinions, that to say a man is a homœopath, does not define him with any accuracy.

The speaker gave three classes: 1. A few who are pure Hahnemannians. 2. A class of honest believers in the law of similars, who are not rigid as to the dose, who believe in educated medical men, and who sustain medical legislation. These are dropping their distinctive title and are on their way back to the regular profession. No obstacles should be placed in their way. 3. The largest class, who pursue sectarianism in the spirit of trade, who traduce the regular profession, misrepresent it, and live by keeping alive in the public mind prejudices against its practice.

The bearing of this diversity of opinion upon the question of consultation with this class of practitioners was also considered. Time did not permit a pursuit of the subject into the future. But were there to be other symptoms in medicine? Was pathology to be based on microörganisms, and was therapeutics to consist in the administration of germicides? A warning was given against the error of the system-makers generalizing from too few facts.

The Society then proceeded to the

ELECTION OF OFFICERS,

which resulted as follows:

President.—W. Morrow Beach, M.D., of London.

Vice-Presidents.—H. C. Gill, M.D., of Cleveland; H. R. Kelly, M.D., of Galion; T. McEbright, M.D., of Akron; and I. D. Robinson, M.D., of Wooster.

Treasurer and Librarian.—T. W. Jones, M.D., of Columbus.

Secretary.—G. A. Collamore, M.D., of Toledo.

Assistant Secretary.—E. C. Brush, M.D., of Zanesville.

Akron was chosen as the *place of meeting* in 1886, and the *time*, the first Wednesday in June.

DR. HIMES, of Cleveland, presented a very interesting essay on *Cases Connected with Life Insurance Examinations, with Remarks.*

DR. G. W. RYAN, of Cincinnati, read a report on the

INFLUENCE OF SPINAL IRRITATION AS AN ORTHOPÆDIC FACTOR.

The influence of spinal irritation in the production of various deformities was carefully pointed out and numerous cases cited in proof of the author's statements. An interesting case of spasmodic clubfoot was related, which was readily relieved by treatment directed to the spine. Two other cases, who had been unable to walk for years because of this condition, were cured within a comparatively short time. The essayist placed little reliance upon the remedies ordinarily recommended. He had seen no good effect from the use of phosphorus, strychnia, or ergot. He had no experience in the use of opium. The proper and efficacious treatment is by means of blisters or the actual cautery applied along the spine. Spinal support is of benefit. Faradism and massage were valuable adjuvants to treatment.

DR. ZENNER, of Cincinnati, next read a paper on

DISEASES OF THE SPINAL CORD.

After commenting upon the frequency and gravity of these diseases, he proceeded to relate several cases in which erroneous diagnoses had been made, in some instances by prominent physicians.

Case I. was a typical case of locomotor ataxia which had been diagnosed as rheumatic pains. There was no excuse for an error in a case so well marked as this, but even in the early periods of the disease, the absence of the patellar tendon reflex, lightning pains, and certain ocular troubles, especially a narrow pupil which does not respond to light, will often enable us to make a diagnosis.

Case II. was one of lateral sclerosis which had been mistaken for locomotor ataxia. The danger of placing too much dependence upon the patient's inability to stand firmly with closed eyes was pointed out.

Case III. was one of progressive muscular atrophy, unusual in the adult. The diagnosis was based upon the paralysis and atrophy of the muscles and altered electrical reactions.

The author spoke lastly of the diagnosis of functional diseases of the spinal cord, which was only to be made after a careful examination had failed to reveal any evidence of organic disease.

DR. CORLETT, of Cleveland, followed with a paper entitled

DISEASES OF THE SKIN OF REFLEX NERVOUS CAUSATION,

and gave two distinct varieties of *neuroses cutanea;* one a senso-neurosis in which the characteristic feature is a

disturbance of cutaneous sensation unaccompanied by any lesion, the other a tropho-neurosis characterized by anomalies of nutrition.

Neuroses of the skin are met with in neurasthenic persons, either when they are suffering from pathological changes in the viscera or when the viscera are undergoing physiological evolution, as pregnancy, etc. The most marked neuroses within the author's observation have closely simulated eczema. Senso-neuroses are more frequently associated with mild conditions, nerve irritations, etc., while the tropho-neuroses more frequently follow pathological conditions of a graver import—*e. g.*, nerve lesions.

DR. RANSOHOFF, of Cincinnati, read a

REPORT ON URETHRAL CALCULI.

He presented two specimens which he had removed from a man aged thirty-seven years. The patient had frequently suffered from retention of urine, necessitating the use of the catheter. When the patient came under the writer's care a large abscess was found behind the peno-scrotal angle. The abscess was opened, but no stone detected until an instrument was passed. The median operation was performed, and two calculi removed; one smooth, weighed 265 grains; the other, very irregular, weighed but 5 grains. The small calculus had doubtless produced the abscess; the larger one had probably been in the urethra for sixteen years.

In the evening a promenade concert and banquet were given by the Montgomery County Medical Society.

FRIDAY, JUNE 5TH.—THIRD DAY.

MORNING SESSION.

DR. LANDIS, of Columbus, presented a paper on

OCCIPITO-POSTERIOR POSITIONS,

in which the diagnosis, methods of rotation, and the use of the forceps were thoroughly discussed. A series of illustrative cases were given.

DR. N. P. DANDRIDGE, of Cincinnati, read

SOME CLINICAL NOTES ON OSTEOTOMY, WITH CASES.

After short quotations from recent authorities, showing that osteotomy, in experienced hands, was capable of dealing with otherwise irremediable deformities, and that the accidents following were few in number, and the percentage of mortality slight, the author gave his personal experience. In two cases the femur had been divided below the trochanters (Gant's operation); the first being a case of bony ankylosis at a right angle in an adult after hip-joint disease. The operation resulted in leaving a limb only an inch and a half shorter than its fellow. The second was a case of spontaneous dislocation in a child with necrosis of the opposite tibia, and here the result was again satisfactory.

The treatment of bowlegs was illustrated by two cases occurring in sisters, respectively fifteen and seventeen years of age. The first was successful, but the second operation terminated fatally from septicæmia. These cases were fully illustrated by diagrams. In conclusion, the author advocated strongly the advantages of osteotomy, but at the same time enforced the necessity of every care to avoid the accidents which may ensue.

DR. HALL, of Chillicothe, next read an interesting paper on

ABDOMINAL SECTION,

in which he gave much information as to the modes and successes of the operators on the other side of the water, gleaned from personal observation.

DR. VON KLEIN, of Dayton, followed with an essay on

VOICE.

After detailing some points in physiology, he passed on to a brief history of music and the famous singers of the world. He combated the popular idea that the world's greatest singers were born under Italy's blue sky. He referred at length to the climatic influences on the cultivation of the voice, and claimed that America had produced the sweetest voices and best singers of all times.

The last paper of the session was by Dr. Herrick, of Cleveland, on *Dietetics of Typhoid Fever*.

DR. BEACH, the PRESIDENT-ELECT, was introduced to the Society, and in a short but appropriate speech returned thanks for the honor conferred upon him.

After passing the usual complimentary resolutions, the Society adjourned to meet in Akron on the first Wednesday of June, 1886.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, May 26, 1885.

THE VICE-PRESIDENT, CHARLES MCBURNEY, M.D., IN THE CHAIR.

PRIMARY EXCISION OF WRIST-JOINT.

DR. MCBURNEY presented a patient who received an unusual injury three months ago, when his hand was caught between the coupling of an engine and a car, and all the bones of the carpus with the exception of the scaphoid and pisiform were crushed. The metacarpal bones and also the radius and ulna entirely escaped injury. A large wound was produced along the inner side of the hand, lifting up about six inches of the skin, but the tendons were not torn. The comminution was so great as to require removal of all the bones of the carpus except the scaphoid and the pisiform. The operation was performed under bichloride irrigation, and a firm permanent antiseptic dressing applied with iodoform gauze and plaster of Paris, which was kept in place eighteen days, after which the dressing was changed occasionally. There was no rise of temperature at any time during the progress of the case. The man now has some motion at the wrist in every direction, even some lateral motion, and the motion of the fingers is steadily increasing. The result was very much more satisfactory than Dr. McBurney had expected. He did not know of a case where the bones of the wrist were so extensively crushed without injury to adjacent bones.

PERSISTENT PRIAPISM.

DR. L. A. STIMSON presented a man forty-eight years of age, who came under his care about a week ago, having a good family history, a doubtful history of syphilis, and who had been married twenty-five years. The first thing the patient noticed was recently that after having sexual intercourse his erection was slow to

subside, and nearly three months ago without previous trouble except rheumatic pains simulating sciatica, he noticed upon the glans penis two raised deep-colored spots, one on either side, and these were immediately followed by priapism, which has continued until the present time. The penis has remained as it is now without change in size and coloration. It was first treated by elastic pressure, which resulted in slight superficial sloughs upon the glans. The organ measures six inches in circumference, six inches in length upon the dorsal surface, and ten inches and a half from the bulb to the glans. The bulb shares in the erection, as do also the two cura, although the right is somewhat less involved than the left. There is a slight dorsal incurvation and a slight concavity towards the right. The only noticeable feature in the general appearance of the patient was a peculiar livid color of the lips, and there was exaggeration of his reflexes, most marked upon the right side. There were no symptoms of locomotor ataxia. The blood had been examined and showed no excess of the white blood-corpuscles, although there was a distinct enlargement of the spleen and liver, and also some consolidation at the apex of the right lung, and some pleuritic friction sounds upon the left side of the chest. There was but slight sexual appetite. The patient's principal suffering was from an aching pain in the perineum. The stream of urine was small, but there was no pain on micturition.

DR. MARKOE referred to a case of priapism occurring in a patient in whom there were symptoms of leucocythæmia. The peculiarity of the case, however, was in the fact that the erections seemed to be confined to the corpora cavernosa. The glans penis was almost entirely flaccid, as well as the entire corpus spongiosum.

DR. POST had had a case under his care in a man somewhat older than Dr. Stimson's patient, who had priapism equal to this which had continued about three months. Otherwise he was apparently a healthy man.

DR. MCBURNEY thought that the suddenness with which the condition developed would seem to dispose of pressure on bloodvessels as the cause, unless it was from extravasation of blood, and it would also seem to dispose of leucocythæmia as a cause. The history of the case would lead one to think of some neurosis, perhaps some disturbance of the sympathetic system.

DR. STIMSON said he regarded the case as of central origin.

DR. L. A. STIMSON then read a paper entitled

INJURIES OF THE BLOODVESSELS IN THE REDUCTION OF DISLOCATION OF THE SHOULDER.

(See page 653.)

DR. STIMSON presented, in connection with his paper, a specimen removed *post-mortem* from the patient whose case Dr. Sands reported to the Society in December, 1879, a woman 86 years old with dislocation of the shoulder of seven weeks standing. Ether was given, slight movements made to break up adhesions, and then slight traction upward and outward. Immediately a swelling appeared in the axilla, the radial pulse ceased in the affected side, and the patient was extremely prostrated, death by syncope appearing to be imminent. The condition was relieved by hypodermics of brandy, and the arm bandaged to the side. For several days the patient remained in a critical condition, attacks of syncope occurring every night, but she gradually recovered. She died in May, 1885, five and a half years after the accident.

The specimen consists of the upper part of the humerus, the adjoining portions of the scapula and clavicle, the artery, and some of the nerves. The head of the humerus has torn through the subscapularis muscle and lies below to the inner side of the coracoid process. It is slightly rotated outward; the greater tuberosity has been torn off and occupies the glenoid cavity, but has reunited with the humerus. The subscapularis lies between the humerus and the head of the scapula, and is firmly united to both.

The artery and median nerve lie at the inner border of the anterior aspect of the head of the humerus and are adherent to it. The artery is most firmly fixed at the lower part of the head, and there presents a marked narrowing and a change in direction of about 30°, the angle being open externally. The posterior circumflex artery, very much larger than usual, is given off a quarter of an inch below the narrowed point. When the specimen was fresh, liquid injected into the upper end of the artery flowed freely from its lower end; but in cutting it open longitudinally on each side of the constriction, it was impossible to detect a channel through the latter, and it is probable that the liquid made its way through the dilated circumflex. The subscapular artery could not be found.

The artery for an inch and a half above the occluded point was occupied by decolorized clot adherent to its posterior wall and terminating just below the origin of the acromio-thoracic. The artery is not atheromatous.

The injury appears to have been either a rupture of part of the wall of the artery, or possibly the avulsion of the subscapular branch; and the arrest of the hemorrhage was probably aided by the pressure upon the vessel of the head of the humerus and by the syncope.

DR. POST said that these cases formed an extremely small proportion of the cases of old dislocation which were reduced, and he would like to ask whether the danger of rupturing an artery was sufficient to deter one from undertaking to reduce such dislocations. He had had a number of cases of this character, and had succeeded in several instances in reducing the dislocation at the end of five or six months without doing injury, although he had not resorted to a very great amount of force or violent movement. It had seemed to him to be legitimate to resort to surgical manipulations for the purpose of reducing the dislocation, and he would like to know if he had been wrong in that view.

DR. MCBURNEY thought that when dislocation occurred in a moderately young individual, and the parts had not been manipulated very much, and the history showed that the first injury was not followed by very much swelling or inflammatory action, it might properly be the subject of an attempt at reduction even at a considerable time after the occurrence of the original injury. But where other conditions were present and the case occurred in an old person, the results were not very satisfactory even when the dislocation was reduced, and it might be questionable whether the effort should be made; at least such cases were worthy of caution.

So far as statistics went, Dr. Stimson's collection did not pretend to include a number of other accidents,

such as fracture of the humerus, which occurred rather frequently.

DR. STIMSON said that he had not directed attention to other accidents, although he had known of three cases of fracture of the humerus as a result of efforts to reduce old dislocations occurring in one surgical service within six months.

DR. HALL asked if it would not be a more scientific procedure to cut down and liberate the head of the bone.

DR. STIMSON remarked that this had been done with success.

EPITHELIOMA OF THE RECTUM.

DR. A. C. POST presented a specimen of epithelioma of the rectum, which he removed that afternoon, at St. Luke's Hospital, from a man fifty-three years of age, of good general health and constitution, and who had been subjected to hemorrhages from the rectum during the last two years, with more or less pain, but the disease had not advanced so far as to cause symptoms of obstruction. When Dr. Post first saw the patient he found that there was a morbid growth within the rectum not connected with the sphincter, at least three or four centimetres from the sphincter, and he was able to pass his finger above the diseased part, and on drawing upon it, the mass seemed to move freely upon the surrounding parts. He determined to excise the tumor and make an effort to save the sphincter, which he succeeded in doing. He began by making an incision through the posterior part of the anus down to the coccyx, and laying open the posterior part of the rectum, and then making a lateral incision on each side, at a distance of two or three centimetres from the anus. The lateral incisions were extended backward and curved inward, so as to meet the median posterior incision. These lateral incisions throughout their whole extent were on the outer sides of the rectum, and not involving its coats. As he approached the wall of the rectum he made the dissection with a blunt instrument and with the fingers, using the knife and scissors as little as possible. He succeeded in reaching as high up as the upper extremity of the tumor, and then divided it into the lateral portions, opening it before and behind, and cutting through the walls of the rectum above and below it. It was somewhat difficult at certain points to make these incisions, but he succeeded finally, after a protracted dissection. There was only a moderate amount of hemorrhage, and no oozing of blood at the close of the operation. He applied a solution of chloride of zinc, two scruples to the ounce, to the surface, irrigated the wound with mercuric bichloride solution, 1 to 1000, drew the parts down, and connected the mucous membrane above the excised parts to the parts below, and made a continuous canal on all sides. He then dusted the parts with iodoform, introduced a tent of iodoform gauze into the rectum, applied iodoform gauze over the surface with absorbent cotton and a T-bandage.

The case was an unusually favorable one for operation, because of the fact that the sphincter was not involved and the disease was almost entirely confined to the mucous membrane and the parts immediately adjacent to it.

DR. GEORGE A. PETERS said that the case seemed to him to be a very favorable one for operation, and that Dr. Post was able to get good coaptation throughout the entire circumference of the bowel.

NEW YORK STATE MEDICAL ASSOCIATION.

FIFTH DISTRICT BRANCH.

Scientific Meeting held at Poughkeepsie, May 19, 1885.

(Specially reported for THE MEDICAL NEWS.)

IN the absence of the President, Dr. J. C. Hutchison, of Brooklyn, DR. J. G. PORTEOUS, of Poughkeepsie, was called to the Chair.

DR. J. D. BRYANT, of New York, reported

THREE CASES OF LIGATION OF THE EXTERNAL CAROTID: IN TWO, BOTH VESSELS WERE TIED SIMULTANEOUSLY.

Having given an early history of the operation and stated the objections which had been urged against it, some of which he said are still held valid, he proceeded to narrate his own cases. The operation in the first case was for the relief of a large and rapidly increasing aneurismal tumor resulting from a blow with a bottle in front of the left ear, and involving the trunk of the temporal artery and its terminal branches, together with the occipital. Dr. Bryant ligated the external carotid, under antiseptic precautions, in August, with the effect of reducing the tumor one-third. Ten days after the operation, however, there was noticed a slight returning pulsation. This afterwards increased, and the bruit also returned. Both the pulsation and bruit, it was found, could be checked by making pressure on the external carotid on the opposite side (the right). About seven months afterwards he operated on the tumor itself. Among the lessons which this case seemed to teach were, that the ligation of the external carotid in such cases is but a temporary expedient, and that the division and ligation of all the vessels leading to the growth, except just at the flap, are required. Six other similar cases had been reported, and in only two of them was a cure effected by ligation of the external carotid. The ligation of this artery, therefore, can only be regarded as a palliative measure and not curative, except in connection with other procedures. He did not think it justifiable to ligate the common carotid, since the rate of mortality is equal to the number of recoveries.

Dr. Bryant's other two cases of ligation of the external carotid, in both of which both vessels were tied simultaneously, were for the relief of malignant disease. In the first, excision had been repeatedly followed by rapid recurrence, and the knife was no longer available. Death occurred eleven days after the operation from hemorrhage of the facial artery at a point of sloughing, and he attributed the fatal result in the first place to an anomalous arrangement of the external carotid and its branches, which deceived him, and, secondly, to the carelessness of the attendant who did not discover the hemorrhage until the patient had lost so much blood that it was impossible to restore him, although transfusion with a saline solution was resorted to. This was the only case which had been reported in which death resulted from hemorrhage at the seat of disease.

In the second case the operation was also performed for the starvation of a malignant growth. At the present time, nearly four weeks afterwards, the disease, which at the time the two external carotids were ligated was progressing rapidly, is in a quiescent state. While he does not expect to cure malignant disease by this pro-

cedure, he believes that it is a rational and effective means of treating malignant and other growths which are fed by the branches of the external carotid. Exclusive of the two cases now presented, the operation has been reported in six cases, in four for the relief of malignant disease, in one for a vascular tumor of the face (in which no benefit was derived from it), and in one for a pulsating tumor at the back of the neck, with the same unsatisfactory result.

Dr. Bryant's general deductions were as follows:

1st. That ligation of the external carotid artery, with independent ligation of its branches arising from the first inch of its trunk, is a safe and commendable operation.

2d. That when the facial and lingual arteries do not arise singly or by a common trunk from the first inch of its course, the branches arising at the bifurcation should be tied.

3d. That a simultaneous ligation of the external carotids is a rational preparatory measure to operations involving the parts supplied by their branches when dangerous hemorrhage is feared.

4th. That simultaneous ligation is advisable to diminish the rapidity of the development of extensive malignant growths when nourished by the branches of the external carotid.

5th. That the ligation of one or both external carotids for the cure of aneurismal formation of the branches of the same is not warranted as an independent measure.

6th. That ligation of the common carotid should not be done for the cure or for the arrest of morbid conditions involving the external carotid with its branches, except as a final resort.

The paper was discussed by Drs. Wieber, of Brooklyn, and Hinton and Gouley, of New York, and the discussion brought to a close by Dr. Bryant.

DR. S. J. MURRAY, of Brooklyn, read a paper on

DIPHTHERIA, AND ITS TREATMENT BY CALOMEL.

Having given a brief sketch of the history of the disease, he said, in regard to the epidemic, and occasionally endemic nature of diphtheria, the evidence was plain; but it was still an open question as to how far it possesses contagious and infectious properties. That it is transmitted directly by contact with the morbid products generated by the local disorder, he did not himself doubt. Its prevalence, and especially its virulence, is favored by defective drainage and contaminated air, and by the drinking of impure water. It is certain, however, that occasionally diphtheria appears in a sporadic form, and that isolated cases sometimes occur which can be attributed to no known cause whatever.

The large rate of mortality, sometimes running as high as fifty per cent., in this disease would seem to show that we have not adopted the best plan of treatment for it. The entrance of the diphtheritic poison, he believed, is effected in some way long before the disease is recognized by its local manifestations, and it destroys life, not by its local, but by its constitutional effects. In prescribing a drug intelligently, it is necessary to have some accurate knowledge of its effects on the system, and he therefore referred briefly to the action of calomel, which is the remedy which he employs in diphtheria. This drug, on entering the stomach, is supposed to escape unchanged into the intestines. It is then decomposed by the alkaline juices, and a portion of it immediately absorbed, passing into the bloodvessels. He was aware that it had already been employed to some extent in diphtheria, but it had been pretty generally condemned as a dangerous remedy. It was not the legitimate use, but the abuse of it, he believed, which had been followed by unpleasant after-effects. Dr. Wallon, in his able paper read before the Kings County Medical Society, in which he advocated the bichloride of mercury treatment, said that when the patient's bowels were constipated, he gave the mild chloride. We might infer from this, he said, that his success was in part due to the latter.

While others had used calomel for diphtheria, he knew of none who had used it in the same quantities that he had done. He did not adopt this plan of giving calomel in large doses until he had exhausted nearly or quite all of the remedies prescribed by various authors, and when he commenced with it he resolved that he would give it a thorough trial. The two following cases were the first in which he employed it: On Nov. 27, 1879, he was called to a house, where he found the whole surroundings in a most filthy condition. The parents had just returned from the funeral of one of their children who had died of diphtheria. On entering, he found a girl of ten and a boy of eight who were ill with the disease. The boy had been sick three or four days. His temperature was 103° and his pulse 115, and he was thin and anæmic. The pharynx was covered with a dirty, grayish membrane, foul-smelling, and strongly adherent. The girl's throat presented much the same appearance, while her temperature was 101° and the pulse 96. He immediately ordered the house to be disinfected, and gave the girl ten grains of calomel, and the boy eight; these doses to be repeated every four hours until he returned the following day. He also had the throat lightly swabbed with a mixture of carbolic acid and glycerine, and ordered stimulants and proper nourishment to be given at stated periods. When he called the next morning, the patients had each taken four doses of calomel, of ten and eight grains, respectively. The temperature of the girl had fallen one degree and she seemed a little better; but the condition of the boy, with the exception that the temperature had fallen half a degree, was not at all improved. The treatment was ordered to be continued. On his third visit the girl was doing very nicely, and a portion of the membrane was gone. She had taken ninety grains of calomel, and he now ordered the ten grain doses to be given only night and morning. The boy's temperature had fallen to 101°; but the appearance of the throat was about the same as before. The calomel was continued at the same intervals, but in five grain instead of eight grain doses, and in addition he ordered five grains of quinine every six hours, with an increase in his stimulants and amount of nourishment. On the following day the membrane was found to have entirely disappeared from the girl's throat, and the calomel was consequently discontinued. She was placed upon quinine in tonic doses, and made an excellent recovery. The boy's condition was also found to be more favorable; the pulse and temperature being nearly normal, and the membrane being partially detached around the edges. He had now taken about 100

grains of calomel, and it was discontinued, though the quinine stimulants and nourishment were maintained. He made a slow, but good, recovery. Having related a number of other cases with favorable results under the calomel treatment, Dr. Murray said, in conclusion, that he always gave the remedy dry, since when thus administered, more or less of it lodges upon and around the membrane, acting as a solvent and preventing its extension. He had never seen hemorrhage after the removal of the membrane, or the formation of a second membrane. Although the calomel acted as a sedative, it did not produce mercurialization or leave any unpleasant after-effects.

DR. ALFRED L. CARROLL, Secretary of the New York Board of Health, said that unquestionably the cases reported in the paper recovered after the administration of calomel; but in listening to it a doubt had arisen in his mind as to whether the calomel was, in reality, the efficient agent in their cure. In the first cases described the sanitary condition of the premises was very bad, and the first thing that the doctor did was to remedy this. Now, diphtheria is generally recognized as a filth disease, and it is a fact that a large number of cases recover without any medicinal treatment whatever, if they are placed under good hygienic surroundings. Again, with the calomel, stimulants, and nourishment were very freely given, and he had personally seen cases which recovered very rapidly under the use of stimulants and nourishment alone, without anything more, in the way of drugs than an occasional dose of quinine. Fresh air, stimulants, and plenty of food are very potent factors in the successful treatment of diphtheria; and when these are all made use of, it is not quite clear how far the calomel aids in securing the great results noted.

There are two things which he has especially noticed in regard to diphtheria. The first is, that the amount of exudation has no positive relation to the severity of the disease; and the second, that, in his own experience, at all events, the most rapidly fatal cases are those in which the temperature never rises above the normal, or if it does soon becomes reduced.

DR. GREENE, of Buffalo, who was a delegate from the Fourth District Branch of the Association, said that he had had a large experience in the treatment of diphtheria, and that he had become convinced that the chlorides are the most important agents for internal administration in it; though for himself he prefers others to either the bichloride or the mild chloride of mercury. He had, however, used the bichloride with good effect in combination with tincture of the chloride of iron. He believes alcohol is essential in diphtheria, considering it an excellent germicide, and said that he always commenced the treatment of every case with alcohol, unless the fever was very high. He also believed in plenty of quinine and a nourishing milk diet. During the last two or three years he had seen some very severe and malignant forms of the disease; but, except in the case of infants, he always felt assured that if the parents would carefully carry out his directions, there would be no doubt of recovery.

As a local application, he preferred to all others a saturated solution of persulphate of iron (a drachm to about four or five ounces of water). He believed there is nothing like it, and said he had saved five cases out of eight of membranous croup in which he had used it. He employed it by means of an atomizer which gave a continuous spray, and during its application he had seen some patients throw out whole casts of the upper part of the trachea. There was one case of special interest which he would relate: He was called late at night to see a young child who was cyanotic and choking to death. He at once gave it as much brandy as he could get down it, and commenced the use of the persulphate spray. Presently a violent paroxysm of coughing was induced and it threw up a large mass of membrane, with immediate relief.

DR. E. R. SQUIBB said that Dr. Greene, was mistaken in supposing that his solution of the subsulphate of iron is a saturated one. The Monsell solution contains a far larger proportion of the salt than his so-called solution, but the latter is a safer one to use, and more efficient for the purpose required than a stronger solution. He approved of Dr. Murray's method of giving calomel dry, as this had long been urged as the best way to administer it, and as an albuminate of mercury is thus formed, which is soluble by the fluids of the mouth, it has been proposed to use an albuminate of the drug which was made artificially outside the body.

DR. R. C. VAN WYCK, of Dutchess County, read a paper on the

TREATMENT OF CEREBRAL HEMORRHAGE AND EMBOLISM BY THE INTERNAL USE OF CARBONATE OF AMMONIA.

Having related in minute detail two cases occurring in his practice, he stated that the advantages which he claimed for the treatment were the following:

1. As a diffusible stimulant to the general circulation, relieving the anæmia which is present in the brain, increasing the cutaneous circulation, and inducing perspiration—relieving in this way intracranial pressure.

2. By its direct action in dissolving the clots. The only agents which possess this property are the alkalies, and the most efficient of these is ammonia.

3. In the œdema and congestion of the lungs so often seen in apoplexy, the used of this salt will frequently relieve the condition, partly by its stimulating action on the terminal capillaries, and also by its expectorant action on the bronchial mucous membrane.

4. By keeping up the alkalinity of the blood, and preventing further thrombosis.

Remarking that he did not claim for this drug a specific action, but only that it acted as an efficient auxiliary to the use of other measures, he said that in the treatment of cerebral hemorrhage the following would seem to be the proper order of procedure:

1. To endeavor to control prodromal symptoms, which threaten an attack of apoplexy, by prompt venesection and catharsis.

2. To relieve the period of reaction after paralysis has taken place by arterial sedatives, preferably aconite.

3. To remove the exudation, relieve cerebral anæmia and pulmonary congestion, and prevent further thrombosis by the free use of carbonate of ammonia.

4. To support the system by nourishing, yet unstimulating diet, and by the use of remedies which specially

nourish the brain tissue, such as lactophosphate of lime, cod-liver oil, and the phosphate of zinc.

5. To increase the muscular development by massage, friction, electricity, and strychnia.

The carbonate of ammonia should never be given in cerebral hemorrhage, he said, until the period of reaction has fully set in—say, from ten days to two weeks. It should then be given continuously for at least a month, or until the retrograde changes in the clot are accomplished. In thrombosis and embolism, if the diagnosis can be clearly made, it should be given at once. The dose employed by him is five grains three or four times a day, and it is given in half an ounce of liquor ammoniæ acetatis. He said there is one class of cases in which the carbonate of ammonia had not acted well in his hands, viz., cases of cerebral hemorrhage associated with interstitial nephritis and hepatitis. Here he had had good results from the use of sodium phosphate, in doses of from twenty to thirty grains, given in the infusion of dandelion, three times a day after meals, and of bichloride of mercury in doses of one-twenty-fourth of a grain, given (sometimes combined in a pill with digitalis and squill) before meals. In conclusion, Dr. Van Wyck read a letter which he had received from Prof. Roberts Bartholow, in regard to the utility of the carbonate of ammonia plan of treatment. There is one class of cases, Dr. Bartholow wrote, in which he had seen most admirable results, viz., the cases of thrombosis of cerebral vessels due to chronic arteritis. Embolism of the brain, secondary to lesions of the cardiac valves, is another condition in which the same treatment is very effective.

DR. J. G. PORTEOUS read a paper on

HYPERTROPHY OF THE PROSTATE GLAND.

He briefly mentioned the symptoms, and said that the diagnosis is not difficult. From thirty to fifty per cent. of men over fifty years of age are troubled with this condition, and the suffering caused by it is often extreme. The administration of drugs has no effect in reducing the size of the enlarged prostate. Personally, he had had but little experience, except with the senile variety of the trouble, which is by far the most common. The best treatment, he believed, is the early use of the soft catheter; the instrument to be passed every three or four days. By this means it is possible to avert or greatly postpone the distressing symptoms of the condition; but if a case is left too long without treatment, there will almost inevitably be great difficulty in its management. There is one important lesson that he had learned in connection with this affection, and that is, that it is extremely dangerous to empty the bladder completely. Formerly he had done this, but the results had more than once been so disastrous that now he is content to adopt the plan of gradual evacuation. When this is practised, there is seldom any blood, and the quantity of pus is much less; while the patient lives longer and gets along with less suffering. In conclusion, he would, therefore, say, empty the bladder in these cases with great caution, and always use a soft catheter. When there is very great irritation present, it is advisable to resort to the aspirator until this has been sufficiently allayed to permit of the use of the catheter. While this is not necessary in ordinary cases, he believes that the aspirator will in the future be more often used in connection with hypertrophied prostate than it is at present.

DR. J. W. S. GOULEY, of New York, said he was much gratified to hear of the wise course which Dr. Porteous had adopted in cases of retention of urine from enlarged prostate. The idea of gradual evacuation of the bladder in these cases had been first suggested by Sir Benjamin Brodie, and Dr. Porteous by careful clinical observation had arrived at the same conclusions as that great master. Young practitioners are always anxious to see the last drop of urine, and he said he could relate a dozen cases in which death had resulted from the complete emptying of the bladder. Caution in this regard was the principal practical point that was impressed by the paper just read.

Another point to which he should like to call attention was the existence of incontinence of urine in connection with enlarged prostate. Hypertrophy of the prostate is not a single entity, but consists of a number of entities. At the present day we can determine what form of hypertrophy is present, and this knowledge guides us in the selection of the proper instrument to be used. He said he agreed with Dr. Porteous that, as a rule, the vulcanized India-rubber catheters are the safest, particularly for patients to pass themselves; but cases are met with from time to time in which it is not possible to enter the bladder with them, viz., those with intraurethral hypertrophy, with a zigzag course of the urethra, and, perhaps, a bar at the neck of the bladder. Then the metallic flexible elbow catheter of Mercier is required. When there is a false route, Mercier's invaginated catheter is invaluable. With this instrument Dr. Gouley said he had never failed to get into the bladder, and since he had been in possession of it he had thrown the aspirator entirely aside. Every man who has enlarged prostate, he went on to say, does not have retention. On the other hand, the patient may have incontinency, which is not to be confounded with the dripping of an overflowing bladder. In conclusion, he spoke of the importance of the surgeon's being on his guard against the possible stoppage of the catheter by a blood-clot filling up its lumen, so that no urine could pass through it.

Dr. Robert Newman, of New York, having, in the course of some remarks on the paper, recommended the use of cocaine in cases where the parts are so sensitive that instruments cannot be tolerated, Dr. Gouley expressed the opinion that this is bad practice. It is highly desirable, he thought, that we should have the sensations of the patient to guide us—otherwise there is a liability of making a false passage—and the skilful catheterist, having made a careful diagnosis and selected the proper instruments, will not be at all likely to give pain.

DR. C. S. WOOD, of New York, read a paper entitled

REPORT OF A CASE OF SO-CALLED METASTASIS OF ACUTE RHEUMATISM FROM THE SHOULDER AND ARM TO THE MENINGES OF THE BRAIN, RESULTING FATALLY.

The patient was thirty-eight years of age, and inherited a strong rheumatic tendency. The rheumatic attack referred to was treated first with salicylate of soda, and afterwards with alkalies in full doses, morphia being also used as occasion required. Eight days from the commencement of the illness the metastasis

took place, and the fatal result rapidly ensued, the temperature rising to 106° just before death. No autopsy could be obtained. During his professional career, Dr. Wood had met with a number of such cases, though the most of them occurred while he was serving as a surgeon in the army. In conclusion, he quoted the opinion of various standard authorities upon this subject.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, June 4, 1885.

THE PRESIDENT, A. JACOBI, M.D., IN THE CHAIR.

DR. RICHARD H. DERBY read a report on

CONTAGIOUS OPHTHALMIA IN SOME OF THE ORPHAN ASYLUMS AND RESIDENTIAL SCHOOLS OF NEW YORK CITY.

A child in these institutions, he said, is far more liable to lose its sight from contagious ophthalmia than to lose its life from scarlet fever or other infectious diseases, over which such careful surveillance is kept by the Board of Health. Having stated that he had made an examination of 7440 children in 24 orphan asylums and residential schools, he gave a brief description of the disease referred to in his report, as blenorrhœal conjunctivitis, and its complications. He then said that it often exists among the children in these institutions without any medicinal treatment whatever; or if these affections are treated, it is merely as a simple catarrh.

The disease is most frequently communicated by means of towels, and by the water in which children wash together. Fourteen years' experience as an officer in one of the largest ophthalmic hospitals in this country, has convinced Dr. Derby of the great prevalence of the trouble; and his inquiries have demonstrated the fact that the ophthalmia is almost invariably contracted in the institutions spoken of, the eyes of children, as a rule, being perfectly healthy when they are committed to them.

In the asylum which he first visited, out of 326 boys, he found 96 suffering from contagious ophthalmia; and out of 331 girls, 65; a total percentage of 24.5. Separate towels were used for each child, and the general sanitary condition of the institution was good. In this respect there was a great improvement over the state of affairs which he had found on the occasion of a former visit, in company with the late Mr. Theodore Roosevelt, and it was in consequence of suggestions then made to the managers that the system of separate towels and other reforms had been adopted.

In the second institution visited, out of 1586 children, there were 488 cases, or a percentage of 30.7. In the third, there were 782 children, and 111 cases, or 14.2 per cent. In the fourth, 188 children, and 93 cases, or 49.4 per cent. In the fifth, 740 children, and 71 cases, or 9.5 per cent. In the sixth, 96 children, and 26 cases, or nearly 37 per cent. In the seventh, 282 children, and 15 cases, or 5.7 per cent. In the eighth, 455 children, and 74 cases, or 16.2 per cent. In the ninth, 155 children, and 5 cases, or 3.2 per cent. In the tenth, 240 children, and 15 cases, or 6 per cent. In the eleventh, 21 children, and no cases. In the twelfth, 451 children, and 204 cases, or 45 per cent. In this institution there was great overcrowding, and the general condition of the inmates was bad; no attempt was made at isolation. In the thirteenth, the percentage of cases was 5.7. In the fourteenth, the percentage was 17.3. In the fifteenth, there were 151 children, and only one case of contagious ophthalmia. This was an institution in which the cottage plan was adopted. In the sixteenth, on the same plan, there were 122 children, with one case. In the seventeenth there were 399 children, and 7 cases, or 1.9 per cent. In the eighteenth there were 245 children, and 40 cases, or 16 per cent. In the nineteenth there were 98 children, with 2 per cent. of cases. In the twentieth there were 124 children, and 6 cases, or 4.8 per cent. In the twenty-first there were 132 children, and 21 cases, or 15.9 per cent. In the twenty-second there were 18 children, and no cases of the disease. In the twenty-third there were 19 children, and no cases; and in the twenty-fourth, 82 children, and 8 cases, or 10 per cent.

It was not the purpose of the paper, Dr. Derby continued, to discuss the causes of contagious ophthalmia, such as imperfect quarantine, bad hygienic conditions, etc. This object would be gained if he could succeed in drawing renewed attention to the fact that in the orphan asylums and other similar institutions of the city the disease exists to an alarming extent, while attracting but little attention from the attendants. The statistics obtained from his investigations showed that among 7440 children, 1428, or 19.19 per cent., were suffering from communicable eye disease.

When the disease prevails to an unusual extent in any of these institutions, it is the common practice to move the worst cases to their homes, which is in every respect objectionable. The children are apt to be neglected, or if they are taken to an eye infirmary three times a week, as would be demanded in such cases, it imposes an enormous burden upon the already overtaxed parent; to say nothing of the fact that the affected children constitute fresh centres of contagion. Too often the want of proper care results in irreparable damage to the eyes. One great source of the trouble is the overcrowding of children in asylums, since the most of these institutions received additional pecuniary support for each child committed to them.

Dr. Derby, in conclusion, made a number of suggestions, among which were the following:

That all institutions for the case of children should be compelled by law to comply with certain specified requirements for the prevention of the spread of eye disease among their inmates.

That each asylum should be required to present at certain stated intervals a report of the cases of contagious ophthalmia among its inmates.

That complete separation of all affected children from the others should be insisted on.

That adequate treatment, not merely local, but hygienic and general, should be enforced in every case.

That the same precautions should be taken in regard to the spread of the disease as are now employed in the case of scarlet fever and other contagious diseases.

That prompt and systematic action for relief from this pressing evil is required, and that a special hospital is needed for the successful treatment of the disease.

It is time, he thought, that the Academy of Medicine should protest against the present inhuman state of affairs in these institutions for children.

DR. H. KNAPP said that he would in no way underrate the statements of the author of the paper. The institutions referred to, he believed, are at times the direct foci by means of which contagious ophthalmia is spread, and sometimes the outbreaks of the disease are so serious that the authorities controlling them are obliged to close the institutions temporarily and farm the children out. It is too often the case, however, that the children thus sent out are the means of spreading the disease through the community. Some of these institutions take the most active measures to stamp out the disease; but the truth is, that when they once become invaded, a certain number of cases are almost sure to remain all the time. Consequently, he doubted whether the disease is altogether preventable.

He felt sure, however, that those in charge of some of the institutions did what they could to keep it under control. Two of them, one a Roman Catholic institution, and the other a Hebrew orphan asylum, invariably sent candidates for admission to him (Dr. Knapp) to examine the condition of the child's eyes before it was permitted to enter. Very recently he had made an examination of the eyes of all the children in the second of these institutions, which is situated in a most healthful location at One Hundred and Thirty-eighth Street, and in which the children are cared for very much in the way that they would be in private families. The result showed that out of 400 inmates, he found only two with sore eyes, and neither of these was affected with contagious ophthalmia. He thought that Dr. Derby's suggestion, that a certain supervision over the eyes of the children in all these institutions should be maintained, an excellent one; and if from time to time rigid inspections are made by competent physicians, and the reports of the results of the same transmitted to the proper authorities, he believed that large epidemics, at least of contagious ophthalmia, would be avoided. He knew of nothing that would be more philanthropic than the maintenance of such a supervision.

DR. D. B. ST. JOHN ROOSA said that by a curious coincidence, only this afternoon he had been called upon, at the request of the attending physician, to examine the eyes of 242 children in a certain institution. Out of these he found 67 who were affected with conjunctivitis; but it was for the most part of a very mild type. It was probably follicular in character, and he considered it perfectly curable under appropriate treatment and with as good care as could be had without isolation. Two years ago he had seen an outbreak which was much more dangerous in a school which was greatly overcrowded, and in which the treatment adopted had not been very intelligent. He did not consider the authorities of these institutions altogether to blame for the existing state of affairs, but thought that the Board of Health was responsible to a large extent. The institutions are often forced to take children when they did not want them.

In 1834 contagious ophthalmia prevailed among the Belgian army, and when the soldiers were let loose, they carried the disease all over Belgium. In this city the public interest that had been excited in this matter of eye disease in the institutions for children had, he believed, already borne considerable fruit. One interesting fact had struck him in the examination which he had made, and that was, that some of the most delicate and badly nourished children had the best eyes; being entirely free from all trace of the conjunctivitis. For his part, he believed the disease is purely local, and has no special connection with struma.

The remedy is at hand, and to be obtained with perfect ease. The taxpayers of the city should be made to pay for the establishment and support of such a special hospital as Dr. Derby had suggested. The cost to the State of a man with poor eyes, or altogether blind, is a very serious matter, and the reduction of the pauper class is certainly important enough to engage the attention of the political philanthropist. The Board of Health, he thought, should at once take measures for the establishment of such a hospital.

DR. OLTMAN, of Nyack, spoke of his experience in connection with an institution for the care of children committed by the courts. Over one hundred had been admitted during the past winter, and with the exception of two, who were affected with trachoma, all had healthy eyes when they entered. In the winter, however, mild catarrhal disease developed, and went on until the spring. Forty-four children had catarrhal disease, which was probably contagious, seven had acute granular disease, and one had purulent ophthalmia.

DR. C. R. AGNEW said that his interest in this subject began nearly thirty years ago in Ireland, where, in connection with the famine, the disease developed in the poorhouses and other public institutions. At that time he saw an immense number of lids there, and from this stock, he said, the United States had been receiving fresh importations ever since. He had hoped that in the State of New York he would never be called upon to observe such scenes as he had unfortunately witnessed in some of our institutions. In regard to one of these institutions he made a report three years ago, which was afterwards embodied in the annual report of the State Board of Health, and it illustrated very well the manner in which an outbreak of contagious ophthalmia augments and gets headway.

Dr. Agnew then gave an account of an effort to develop an orphan asylum in a neighboring county, when the available funds were totally inadequate for the purpose. In a building which was entirely unfit for this use nearly three hundred children were packed, a much larger number than it could properly accommodate. The hygienic conditions were thus very poor, and contagious ophthalmia soon broke out. The children all washed in a trough sixteen feet long, and by this means the disease was communicated to eight-tenths of those who came in from outside. What made the disease all the worse was the fact that in the infirmary the children had to sleep two or three in a bed. There was a gentleman present at the Academy to-night who had taken charge of the children at that time, and who had brought about a complete revolution. He turned all the children out of doors into two large circus tents, and instead of keeping them upon ten or fifteen quarts of milk a day, as had previously been done, he allowed them to have four hundred quarts. The change produced was indeed marvellous. This was a fair type of a considerable number of institutions which are all the time taking in children for whom they are altogether unable to provide; and he thought, therefore, that there should be much more and better inspection than is now ordinarily seen. It

is not every general practitioner whose opinion as to the condition of eyes can be safely trusted.

He did not like the idea of entrusting such a matter to the State; but there is a limit to individualism and the power of voluntary efforts. It seemed evident to him, therefore, that there is need of some legislation. He believed in agitation of a subject, and it is his opinion that by judicious efforts on the part of those specially interested in the matter, the public mind can soon be brought to realize the necessity for the adoption of active measures for repressing the existing evil. A few years ago the vile condition of the vessels bringing immigrants to our shores was such that ship fever was of the most constant occurrence, the passengers being subjected to as much overcrowding and bad treatment generally as the negroes in the slave ships. This state of affairs continued until public opinion became roused to a sufficient extent to cause the adoption and enforcement of those wise and beneficial rules which now invariably regulate the carrying of steerage passengers. He thought that before an institution for the care of children should be allowed to exist, it should place on file a certificate to the effect that it had ample provision for the accommodation of a certain definite number of inmates, with specified statements of its capacity and arrangements, and that it should be prohibited by law from being permitted ever to receive any more children than the number designated in such certificate. The State Board of Charities, he believed, ought to take some action in regard to this important matter. The managers of these institutions are almost without exception disposed to do what is right. They are perfectly willing to act for the best interests of the children under their charge, but are ignorant of the proper methods to pursue. It is certainly horrifying to think of making six or seven hundred paupers in the residential schools of this city, and it is high time that something should be done to prevent the continuance of the present state of affairs. It is his opinion that the vast majority of children who contract chronic conjunctivitis in these institutions never recover from it, and in after-life they constitute an immense body of drifting and despairing sufferers, in many instances endlessly wandering about from one dispensary to another. A few years ago it used to be the boast of Fourth of July orators that there were no indigenous paupers in this country; but all this is changed, and there is unquestionally a large amount of indigenous pauperism here now.

THE PRESIDENT thought that this disease could never be eradicated as long as an institution in which an outbreak of it occurred remained in the same spot and the children remained in it. All these institutions are, no doubt, designed and expected to do good, but in reality they accomplish much harm. Outbreaks of ophthalmia are liable to occur, notwithstanding all the means adopted to prevent them, just as scarlet fever or measles is liable to break out among the children in them; and these diseases are often of a very malignant turn under the circumstances. Measles, as it generally appears in the community, is a mild disease; but in public institutions it is often very fatal. He believed it would be very much better if children were left in the tenement houses than entrusted to the care of institutions. These institutions are always overcrowded, and whenever a disease like measles or whooping-cough breaks out among the inmates the results are apt to be very serious. Whooping-cough, like measles, is not, under ordinary circumstances, a very grave affection, but among children thus crowded together it often proves fatal; and when this is not the case is likely to be followed by disastrous consequences. Very frequently phthisis, for instance, is the result of whooping-cough or measles contracted in early life in these institutions.

If, therefore, the object contemplated by some of the speakers was simply to add another to our already numerous hospitals, he did not think much good would be accomplished by the present agitation. In such an institution for the treatment of contagious eye diseases he could not doubt that many cases which are mild when admitted would assume a severe type, and that the danger would be increased, instead of diminished, by placing children in it. The question must come up here, as it had already done all over Europe, whether these institutions for children ought to be multiplied at all; and for his part he felt convinced that it would be a benefit to the community if these public institutions were done away with altogether. If the same money now expended for the erection and maintenance of splendid buildings, and the same care now bestowed upon their management, were given to the farming out of the children, he believed that we would be much better off. There would be more children alive, and fewer blind ones than we have at present.

DR. N. T. MITTENDORF said that there are two points which the public do not understand. The first one is, the very contagious nature of the disease in question, and the second, the fact that when it once makes its appearance in an institution it cannot be eradicated. He agreed with the President as to the evils associated with public institutions. In the country branches of the Nursery and Child's Hospital, and of the New York Infant Asylum, the plan had been adopted of placing a few children in separate cottages, and the results had been much better than when a large number of them were crowded together. The best plan at present seems, therefore, to have a number of small buildings and to place as few children as possible in each one. When contagious ophthalmia breaks out in an institution he thought that the patients should be kept in it, but strictly isolated. It is inadvisable to send them to a general eye hospital, for the reason that the disease is likely to spread to other patients, and in an institution where delicate operations are constantly being performed this would be followed by the most serious consequences.

DR. AGNEW then presented

RESOLUTIONS

to the effect that it is necessary and expedient that steps should be taken to prevent the occurrence of contagious eye disease in the schools and asylums of this city, and that the Council of the New York Academy of Medicine should be requested to unite with the author of the paper, the State Board of Charities, the Board of Health, and the Society for the Prevention of Cruelty to Children, in adopting such action as would be most likely to secure this result.

DR. ROOSA seconded the resolutions, and in doing so

said he could take the opportunity of saying a word further in regard to the hospital plan, in favor of which he had spoken. It is necessary to take things as they are, and not as they might be under a Utopian order of affairs. In his opinion, the disease could be successfully stamped out, and his idea would be, not to make the proposed hospital a permanent institution, but simply to resort to it as a temporary expedient.

DR. R. P. LINCOLN then exhibited

A NEW ELASTIC LARYNGOSCOPE AND OTOSCOPE,

together with an electric mouth lamp, lantern, and illuminator for the urethra and other cavities, invented by E. T. Starr, of Philadelphia, and also a convenient primary and storage battery.

CORRESPONDENCE.

A VISIT TO PROF. PASTEUR'S LABORATORY.

MY visit to Pasteur's laboratory was made on the morning of May 12th, and the same evening I took the express train for Rome, to be in time for the International Sanitary Conference, which, according to the invitation first issued by the Italian Government, was to be on the 15th, but which was subsequently postponed to the 20th.

At the request of Dr. Koch, the delegate from Germany, I was invited last evening to meet the delegates from Germany at the house of Dr. Moleschott, one of the delegates from Italy, for an informal talk with reference to the questions which are to be submitted for the consideration of the Sanitary Conference. Dr. Koch expressed his views very freely, and it is evident that he has very positive convictions with reference to his "comma-bacillus" and to the proper measures to be taken to restrict the spread of cholera. It would be premature, however, to state these views at the present time.

While in Paris, armed with a letter of introduction from Miguel to Dr. Roux, one of Pasteur's most able assistants, I made my way to the laboratory, which is quite near the Pantheon—45 *Rue d' Ulm*.

Dr. Roux hastened to introduce me to Pasteur, who kindly conducted me through the laboratory and the adjacent buildings in which the experimental and *commercial* work connected with, or resulting from, his biological investigations is conducted. Dr. Roux, himself, seemed to be chiefly occupied in the microscopical part of the work, and in cultivating various pathogenic bacteria. He is entirely familiar with Koch's method of cultivation upon a solid medium, and showed me pure cultures of the microbe of *rouget*, or swine plague, upon the surface of agar-agar gelatine. While appreciating the value of this method, it is not considered by Pasteur and his assistants as a substitute for the older method of cultivation in fluid media, which has so long been practised in this laboratory, but simply as an additional resource, which is especially useful for certain purposes.

I had brought with me from home a pure culture of the micrococcus which Dr. Salmon has described as the cause of swine-plague as it exists in the United States, and was curious to know whether it was identical with the microbe which Pasteur has under cultivation, and which he has proved to be constantly present in the blood of swine attacked with that form of disease known in France as *rouget*, and to reproduce the disease when inoculated, in pure cultures, into healthy animals. This disease has been supposed to be identical with "swine-plague" or "hog-cholera" as it exists in the United States, and if so, it must be admitted that two different organisms can give rise to the same symptoms, or that one of the investigators named has failed to obtain the veritable germ of this disease, for Pasteur's microbe does not correspond at all with that of Salmon, which is a micrococcus, while Pasteur's is, in fact, an extremely minute bacillus. It will be remembered that Klein, in an elaborate memoir, published some years since, described quite a different organism from either of these, viz., a large bacillus with spores.

The minute bacillus which Pasteur finds to be the cause of *rouget* resembles, as stated to me last evening in conversation, by Dr. Koch himself, the minutest bacillus which produces that form of septicæmia in the mouse, which the German investigator named has so well studed. Dr. Koch admits that this bacilli is the veritable cause of the form of swine-plague which Pasteur has studied, but says that he is familiar with at least two different organisms which bear an etiological relation to other forms of swine-plague which prevail in certain parts of Germany. It seems probable, therefore, that the disease studied by Pasteur is absolutely identical with that which Salmon has had under observation for several years and which he finds to be due to a micrococcus. I have myself obtained a pure culture of the micrococcus described by Salmon, from the blood of a pig suffering from "hog cholera," which was killed for the purpose, and collected with precautions which made it certain that the micrococcus which multiplied abundantly in my culture-fluids came from the blood of the animal, and not from any accidental source.

Pasteur has not only demonstrated the etiological relation of his microbe to the disease *rouget*, but has succeeded in producing an attenuated virus which is now offered by sale by an agent whose place of business is in the immediate vicinity, and who obtains his stock in trade from the laboratory of the famous chemist. The assortment of "attenuated virus" now offered for sale at this establishment is limited to three diseases, anthrax, fowl cholera, and swine-plague (*rouget*).

The price of the anthrax vaccine, sent free in tubes, stated in a circular handed to me by the agent, is as follows:

Tube for 25 oxen or 50 sheep, first vaccine, 2½ francs; second vaccine, 2½ francs; total 5 francs, or $1.

The demand for this vaccine is constantly increasing, and, according to Pasteur, the mortality from anthrax in centre sections has been reduced from ten to twenty per cent. to less than one per thousand. The number of sheep vaccinated during the year 1884, in France alone, was 316,553; the number of cattle 33,906. During the month of April of the present year the orders received have been for a quantity sufficient to vaccinate 108,448 sheep. In that part of the laboratory devoted to the manufacture of vaccine I found two boys engaged in filling little tubes with the *premièr vaccin* and the *deuxième vaccin of charbon*, and in the warm chamber adjoining were numerous flasks containing cultures of the "attenuated" anthrax bacillus, which in due time would be distributed among the farmers of France and

other portions of Europe in which protective inoculations are how being practised.

Pasteur is still engaged in his studies relating to hydrophobia. His experimental inoculations are made upon the extended scale so desirable in researches of this nature, and which the liberal policy of the French government enables him to follow. His arrangements for keeping animals for experimental purposes are admirable, and he showed me with pride the well-made iron cases for dogs, the patches for rabbits, and the yards for fowls, all kept in perfect order and well stocked with animals. Having succeeded in transmitting hydrophobia by inoculations upon the surface of the brain by trephining with virus from the nervous centres of an animal recently dead of the disease, and in obtaining an attenuated virus which produces a non-fatal form of the disease, by which the animal is protected from subsequent attacks, Pasteur's next object is to ascertain whether protective inoculation may be successfully practised after an animal has been bitten by a rabid dog. His experiments lead him to believe that this is practicable, and the test is being made at the present time. The curious thing about these experiments relating to hydrophobia is, that while the nervous tissue has been proved to contain the virus, which by inoculation gives rise to the disease, the exact nature of this virus has not been determined. No microbe has yet been discovered in the virulent material by means of the microscope, and all attempts to obtain cultures of the germ, which Pasteur assumes must be present in this material, have thus far failed. In reply to a question, Pasteur informed me that microscopically he had not been able to recognize any difference between healthy brain substance, for example, and that which, coming from an animal recently dead of hydrophobia, is capable of reproducing the disease.

It will be remembered that some time since an item passed the rounds of the newspapers and medical journals, to the effect that Pasteur was about to visit Brazil for the purpose of investigating yellow fever, and especially of verifying the reliability of the claims of Dr. Domingo Freire to have discovered the germ of this disease and a method of practising protective inoculations against it. I inquired whether there was any truth in this report, and was informed by M. Pasteur that he had not entertained the idea of undertaking such an investigation, although invited by the Emperor of Brazil to do so. He has very little confidence in the alleged discoveries of Dr. Freire, and stated that the Emperor of Brazil, himself, was very incredulous as to their scientific value. I may say that in a letter from Dr. Koch, which I received two or three months since, a similar want of confidence was expressed. My own views with reference to Dr. Freire's methods and reputed discoveries are in conformity with those of the high authorities above named, and have been on record for more than a year.

Pasteur is a vigorous and well-preserved man, notwithstanding his sixty years (?) and the attack of hemiplegia from which he suffered eighteen months since. There is still some paralysis of the muscles of the left leg, and he is obliged to go up and down stairs with caution, but did not show any indications of fatigue from the extended trip which we made together through the laboratory, and the yards in which his animals are kept, which are two or three squares distant from it.

ROME, May 20, 1885. G. M. S.

NEWS ITEMS.

THE AMERICAN MEDICAL ASSOCIATION AND THE INTERNATIONAL CONGRESS.—The London *Lancet* (May 30, 1885), in commenting on the recent action of the Association in reference to the organization of the Washington Session of the International Medical Congress, says: At its meeting, in 1884, the American Medical Association appointed a committee of seven gentlemen to present an invitation to the International Medical Congress at Copenhagen to hold its next meeting in Washington in 1887. As our readers are aware, this invitation was accepted; and the committee, desiring to advance all the arrangements for the meeting, and, believing itself to be empowered to do so, proceeded to nominate the chief officers and to conduct the preliminary negotiations. Unfortunately, it seems that in so doing they have excited certain local jealousies; and at the late meeting of the Association in New Orleans their action was discussed and condemned, and a resolution was passed electing a committee, consisting of the seven gentlemen previously appointed and thirty-eight others, "one from each State and territory," who should "proceed at once to review, alter, and amend the action of the present committee as it may deem best." From the reports of the discussion we gather that some members of the Association consider that the appointments to the Congress should be filled up on a geographical basis, each State being considered as a distinct entity to be represented. We trust, however, that the new committee will take a wider and more enlightened view than that, and will make the appointments solely in reference to the merits of the various nominees, and the degree to which they possess the confidence of the profession in the United States, as a whole, and in Europe. We may be permitted to assure our American brethren that visitors from Europe will in a large measure judge of the position and character of the profession in the States by the scientific eminence of those whom they choose as their prominent representatives. We trust that all difficulties such as we have hinted at will be wisely and amicably surmounted, and that the meeting of the Congress in Washington will be as signal in its success as a scientific gathering, and in its display of true cosmopolitan brotherliness, as any previous one.

INOCULATION FOR CHOLERA.—The following is an abstract of a report made by a committee of the Madrid Academy of Medicine, consisting of Señor Carreras and four others, to the Academia de Medecina y Cirugía, of Barcelona, on this subject.

The report commences with a brief account of Dr. Ferrán's original memoir, in which he states his agreement with Koch's conclusions, and his belief in identity of the microörganism with which he worked and Koch's comma-bacillus. The investigation was conducted with the aid of Dr. Ferrán in the performance of the experiments, or of many of them, and with his full recognition.

The work of the Committee was arranged under the following heads:

1. The investigation of the *morphology* of the micro-organism, the manner of its cultivation, and the changes effected in it by various reagents.

2. The *pathogenic action* of the cultivated organism, especially before attenuation.

3. The *preventive action* of the cultivated organism when ejected after attenuation, both in quantity and quality.

1. *Morphology.*—A full account is given of the precautions taken to secure purity of the apparatus, of the air of the laboratory, etc., and then the mode of preparation of the tubes of sterilized gelatine, and of the flasks of sterilized broth, ready for the cultivation of the microbes, is described. These media were inoculated with (1) the microbe of Van Ermengen, procured from Brussels; (2) the microbe of Ferrán; and (3) the microbe of Finckler and Prior, as obtained from cases of sporadic (non-Asiatic) cholera. The results, summarized, are to the following effect: 1. The micro-organism of Finckler and Prior found in sporadic cholera is distinct from the comma-bacillus of Koch. 2. The organisms described by Koch, by Van Ermengen, and by Ferrán, are the same, and are found in Asiatic cholera. 3. The comma-bacillus (of Koch) represents only one stage of this organism. 4. It has been shown by Ferrán, and confirmed by the Committee, that this organism passes through the following stages: *a*, a spiral filament; *b*, production of spores in fins; *c*, separation of the spores; *d*, growth of the free spores; *e*, change of the spores into a mulberry-shaped mass (*cuerpo muriforme*); *f*, which becomes diffluent protoplasm; *g*, from which, by condensation, a very fine filament is again formed. 5. Bodies, other than this microörganism in its various stages, are also found in the cultivation-fluids. It having been stated by Ferrán that alkaloids which had a toxic action upon animal life generally, had no such action upon the microbe, the effect of the addition to the cultivation of several of these was tried, such as aconitine, morphine, codeine, camphor, digitaline, ergotine, eserine, strychnine, and several others. The result was to confirm the statement as to their inaction, save in the case of eserine, which appeared to favor the development of the spores. The Committee, however, do not enter into any explanation, or speculate further upon this exception. Following the example of Ferrán, in his memoir, the committee do not discuss the question of the classification of the microbe.

2. *Pathogenic Action.*—A. *Experiments on Animals.* These were exclusively performed upon guinea-pigs, by means of hypodermic injection. Von Ermengen's and Ferrán's cultivations were used indifferently, the results being the same in each case. As a preliminary precaution, some of the cultivation-fluid was sterilized by heat, filtered, and injected into a guinea-pig. There was no injury to health, nor were any new organisms found in the blood. The same and similar cultivations, unsterilized, were then injected in various doses (from one to eight cubic centimetres). The severity of the symptoms produced varied directly with the dose. These symptoms were, briefly, at first, discomfort and restlessness, with refusal of food; then rapidly increasing prostration, followed by seemingly painful convulsions, spasms similar to the actions of vomiting, marked cyanosis, terminating generally in death within a period of from six to thirty-six hours, the time varying with the dose. On post-mortem examination, the principal changes were found in the blood, and in the lymph exuding from the neighborhood of the hypodermic injection. The corpuscles were disintegrated or reduced in size, and numerous micrococci, spirilla, and commas were present. In no case was any indication present of septicæmia or pyæmia, nor of the presence of the *coccidia oviformis*. Injection of a very small quantity of the cultivation-fluid into the duodenum, as has been performed by Nicati and Rietsch, of Marseilles, and also by Von Ermengen, was tried with negative results; but, in these experiments, the animals had not been starved. B. *Experiments on Man.*. The same cultivation-fluids were similarly injected hypodermically into eleven human beings (one of the first being a member of the Investigating Committee), for the purpose of studying the pathological results. These are described at length, but the chief points are these: Within a few hours, the site of injection (the back of the arm) became hot and swollen to a limited extent; this was followed by malaise, muscular fatigue, and a sense of exhaustion, nausea, and slight shiverings, followed by febrile action, and a temperature ranging from 100° F. to 101.5° F. The blood, examined during the febrile stage, showed changes similar to those observed in the guinea-pig, but less marked. In all the cases, vomiting and looseness of the bowels were produced, but the vomit and dejecta were not preserved for examination. The dose employed for human beings was half a cubic centimetre, as compared with six cubic centimetres in the case of guinea-pigs.

3. *Preventive Action.*—The general results obtained by Ferrán are stated by the Committee to be absolutely confirmed by them. With regard to the guinea-pigs, it was found that, if those which survived a first injection were afterwards reinoculated, even with doses invariably fatal if employed on the first occasion, *without exception*, no ill results followed beyond a very slight constitutional disturbance. Further, those persons who, having been once inoculated, submitted themselves to reinoculation, experienced only a slight local irritation upon the second occasion. There appears to have been four of these cases, the clinical details of which, together with those of the seven others who were inoculated once only, are given in an appendix to the report.

Lastly, it is mentioned that Dr. Ferrán himself, having suffered one morning with a looseness of the bowels, causing two unusual evacuations, found in the second true specimens of the comma-bacillus, which he used for a series of cultivations.

The report ends by saying that, in the opinion of the Committee, the identity of the microörganism of Ferrán with the comma-bacillus of Koch has been established, and that its pathogenic effects have been proved to be prevented by inoculation. Therefore, a means of averting cholera has been discovered.

The original report was illustrated by photographs, which are not reproduced in the printed copy.—*British Medical Journal*, May 30, 1885.

SOCIETY MEETINGS.—The New Hampshire State Medical Society holds its annual meeting on Wednesday and Thursday next, at Concord.

The American Neurological Association will hold its Eleventh Annual Meeting in the Hall of the Academy of Medicine, of New York, on the 17th, 18th, and 19th.